



# **Arizona Department of Health Services**

## **Arizona Adult Tobacco Survey 2005 Report**

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**Office of Tobacco Education and Prevention Program**

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**Thanks and Appreciation Are Extended to**

All of the Arizonans who participated in the survey

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## **Executive Summary: Arizona Adult Tobacco Survey 2005**

Adult tobacco use represents an important and ongoing morbidity, mortality and health care cost problem. The Arizona Department of Health Services Office of Tobacco Education and Prevention Program (ADHS TEPP) has been working since 1996 to reduce tobacco use in Arizona. This report presents data from the 2005 Adult Tobacco Survey on adult tobacco use prevalence rates, cessation behaviors, and Arizonan's beliefs and attitudes about smoking hazards and tobacco policies. It also provides trends over time on Arizonans tobacco use and other related behaviors, using comparable data from surveys conducted previously in 1996, 1999, and 2002.

Nearly one in five adult residents of Arizona currently smokes. Overall, the smoking prevalence rate of 19 percent in 2005 has declined from the 1996 rate of 24 percent. Current smokers' consumption of cigarettes continues to decline from a high of a median of 30 packs smoked per month in 1999 to a low of a median of 18 packs per month in 2005. Despite these declines, disparities in smoking prevalence still remain for young males 18 to 34 years old (30%), and for those with less than a high school education (25%). Smokeless tobacco use prevalence continues to remain low at about two percent. The majority (89%) of current smokeless tobacco users are male.

Smokers in Arizona continue to indicate a strong desire to quit. In 2005, 46 percent of current smokers made a quit attempt in the past year, up from 43 percent in 2002. Nearly 61 percent of current smokers reported that they are seriously considering stopping smoking within the next six months, and 21 percent report planning to stop in the next 30 days. Of those who made a quit attempt or quit for good, 32 percent used some type of pharmaceutical or non-pharmaceutical assistance. The use of pharmaceutical aids such as the nicotine patch or gum or Zyban has declined from 23 percent in 2002 to 17 percent in 2005.

Reports of medical providers who ask patients if they smoke have consistently increased since 1996, from 31 percent to 73 percent in 2005. However, the rates of those smokers who were advised by their medical provider to stop smoking have declined from a high of 83 percent reported in 1999 to 72 percent in 2005. There is a similar pattern of results for dental care providers who ask and advise their patients about smoking.

Second hand smoke exposure among Arizonans is still of concern. About one-quarter (25%) of respondents are exposed to second hand smoke in their homes or cars, and for those who are currently employed, about 40% are exposed in their home, their car or at work. However, efforts to reduce tobacco smoke exposure in the home and at work appear to be increasing. Home exposure has declined from 18 percent in 2002 to an exposure rate of eight percent in 2005. Those who report having a complete smoking ban in their home has increased from 80 percent in 2002 to 87 percent in 2005. Notably, smoker households with smoking bans increased from 71 percent in 2002 to 77 percent in 2005. In the workplace there was an increase in the percentage of those who report working in places that do not allow smoking, from 42 percent in 2002 to 50 percent in 2005.

The majority of adult Arizonans report exposure to anti-tobacco messages on television, but the rates have declined from 79 percent in 1996 to 61 percent in 2005. Also, 45 percent report hearing of the Arizona Smokers Helpline, the free ADHS TEPP funded statewide smoking cessation information and counseling phone service.

## 1. Introduction and Background

Adult tobacco use represents an important and ongoing morbidity, mortality and health care cost problem. The Arizona Department of Health Services Office of Tobacco Education and Prevention Program (ADHS TEPP) has been working since 1996 to reduce tobacco use in Arizona. The Arizona Adult Tobacco Survey (ATS) provides one source of data for looking at tobacco use in Arizona and at Arizona residents' beliefs about the hazards of smoking, as well as their attitudes towards tobacco policies. Because the ATS has been conducted in four different years (1996, 1999, 2002, 2005), it can also be used to compare Arizona residents' tobacco behaviors and attitudes over time.

The first two fieldings of the survey (1996 and 1999) were performed by the ADHS Telephone Survey Center within the Office of Public Health Statistics. The Telephone Survey Center was disbanded shortly after the 1999 ATS. The Social Research Laboratory at Northern Arizona University administered the fieldings of the 2002 and 2005 surveys. Sampling methods differed somewhat from one fielding of the ATS to another. These differences are described in detail in Appendix A of the ATS 2005 Technical Report. The methodology for the 2005 ATS is briefly described in Section 3.

## 2. Arizona Demographics

The estimated Arizona population for 2005 is 6,044,985. Arizona is the second fastest growing state in the United States. Population growth since the 2000 decennial Census has been 18 percent. See Table 1. In terms of total population numbers, most of the growth has occurred in Maricopa County.

*Table 1. Arizona population growth since 2000 census.*

	<b>DES Estimate</b>	<b>Census</b>	<b>Number</b>	<b>Percent</b>
Area	7/1/2005	April 1, 2000	Change	Change
Arizona	6,044,985	5,130,632	914,353	18%

Source: [http://www.workforce.az.gov/admin/uploadedPublications/1469\\_05-00alphanew.xls](http://www.workforce.az.gov/admin/uploadedPublications/1469_05-00alphanew.xls)

Arizona's population is diverse in terms of its racial and ethnic groups. See Table 2. Four-fifths of the state is considered geographically rural, but only 18 percent of the population lives in these rural areas. Many of these rural areas are home to the 21 federally recognized American Indian Tribes of Arizona.

*Table 2. Population estimates for Arizona residents, 2005.*

	<b>White, Non-Hispanic Latino</b>	<b>African American</b>	<b>Hispanic/Latino</b>	<b>American Indian or Alaska Native</b>	<b>Asian or Pacific Islander</b>	<b>Total</b>
Number	3,923,195	187,394	1,523,336	290,159	114,855	6,044,985
% of Total Population	64.9%	3.1%	25.2%	4.8%	1.9%	100%

Source: <http://www.azdhs.gov/plan/menu/info/pop/pop05/pd05.htm> on March 16, 2006.

For 2005, there are estimated to be 4,434,428 (about 73%) total adults, 18 years or older, in Arizona. As expected in a border state, the population of Arizona cities fluctuates throughout the year due to influxes of migrant workers. Arizona also attracts visitors or "snow-birds" during the

winter months, and is favored as a retirement location. In 2005, there were 784,595 individuals (13% of the population) age 65 years or older in Arizona.

### 3. Methodology

#### 3.1. Sampling

The Northern Arizona University Social Research Laboratory (SRL) used computer-assisted telephone interviewing (CATI) to deliver the survey and collect data. The sample for 2005, purchased from Genesys Marketing Systems Group, used a random-digit dial (RDD) sample that was gathered in proportion to the population distribution across the state. Proportionate RDD sampling technique necessitates weighting of the final dataset so that various population groups are proportionally reflected in the final sample. Weighting was performed to adjust for region, age, gender, and race prior to the data analysis.

To qualify for the resident interview, contacted individuals had to be Arizona residents, at least 18 years of age or older, English or Spanish speaking, and residing in households with telephones. Based on these selection criteria, the 2005 survey was administered to 6,071 English-speaking respondents. Concurrently, a shortened, modified Spanish version (SMSV) of the instrument was administered to 565 Spanish-speaking respondents (i.e., respondents who preferred to take the ATS in Spanish). The 2005 survey was the only survey to ask for age at the beginning of the instrument with additional questions for respondents under 30 years of age regarding their tobacco use. Fielding of the survey began June 3, 2005 and was completed August 11, 2005. The survey took an average of 16 minutes of respondents' time to complete.

The University of Arizona Tobacco Education and Prevention Program Evaluation Unit used the dataset of the 6,071 English-speaking respondents for analysis and comparison to the previous years of the ATS. The results from the 563 Spanish-speaking respondents are provided in a separate report on Hispanic Spanish-speaking ATS respondents.

This report includes trend data from all four fieldings of the ATS. Table 3 provides the total number of respondents interviewed for each year of the ATS, and whether Spanish-speaking respondents were interviewed in that year.

*Table 3. Number of Adult Tobacco Survey respondents for 1996, 1999, 2002, and 2005.*

<b>ATS Respondents</b>	<b>1996</b>	<b>1999</b>	<b>2002</b>	<b>2005</b>
English-Speaking	Unknown	Unknown	6,025	6,071
Spanish-Speaking	Interview offered in Spanish, but number unknown	Interview offered in Spanish, but number unknown	Not applicable, did not offer interview in Spanish	565
Total number	6,039	4,556	6,025	6,635

#### 3.2. Completion Rate and Sampling Error

Completion rates are calculated to indicate the percentage of contacted respondents who agreed to take the survey. Final study calculations indicate a 63 percent completion rate. The survey produced sample estimates on statewide prevalence that are within  $\pm 1.3$  percent at a 95 percent confidence level. Estimates within age, race and gender groupings vary by group, but most are within  $\pm 4$  percent.



### 3.3. Comparison of ATS Adult Respondent Demographics to the Arizona Adult Population Demographics

Table 4 demonstrates that the samples for the last four fieldings of the survey were reasonably representative of the population of Arizona.

*Table 4. Demographic profile of Arizona population and ATS survey samples.*

Attribute	1996 Weighted Sample Percent	1999 Weighted Sample Percent	Population Percent 2000 Census Data*	2002 Weighted Sample Percent**	2005 (English Speaking) Weighted Sample Percent**
Male	45.5%	48.1%	49.4%	49.0%	49.0%
Female	54.5%	51.9%	50.6%	51.0%	51.0%
18-24 years	13.3%	12.7%	13.7%	13.7%	13.8%
25-34 years	21.6%	19.1%	19.7%	19.6%	19.6%
35-44 years	22.0%	21.5%	20.4%	20.4%	20.4%
45-54 years	16.9%	18.4%	16.7%	16.7%	16.6%
55-64 years	11.3%	11.2%	11.8%	11.8%	11.7%
65 years and older	14.9%	17.1%	17.7%	17.8%	17.8%
White	79.7%	78.9%	79.0%	75.6%	68.8%
Black	2.1%	1.9%	2.9%	3.1%	3.0%
American Indian	3.2%	2.5%	4.1%	4.8%	4.1%
Other Race	13.3%	14.5%	14.0%	16.6%	3.0%***
Hispanic	18.7%	17.9%	21.3%	21.0%	21.2%
Non-Hispanic	80.7%	81.1%	78.7%	79.0%	78.8%
Less than High School	9.8%	8.2%	19.0%	19.0%	19.0%
High School Graduate	28.0%	28.5%	24.3%	24.0%	24.0%
1-3 years of College	34.0%	32.0%	33.1%	33.0%	33.0%
College Graduate	27.4%	29.7%	23.5%	24.0%	24.0%

#### KEY to Demographic Table

\* The census data used for 1996 and 1999 sample weighting were not available in prior reports. Provided here for comparison are the demographic data used to weight the 2002 and 2005 ATS sample. These data were taken from 2000 Census tabulations, as summarized by the Arizona Dept. of Economic Security at: <http://www.de.state.az.us/links/economic/webpage/page2.html>

\*\* For weighting purposes, age, sex and race/ethnicity group percentages are based on total adult population of 3,763,785. Educational weights are based on a population of 3,256,184 adults 25 years and older.

\*\*\* The race and ethnicity question was asked differently in 2005. It was one question instead of two separate questions as in previous years. The new question in 2005 was: "Which of the following categories describes you best? Are you...?" For the response choices, the Hispanic ethnic category was included in the same list with the racial categories, instead of being asked as a separate question. This change in question format most likely affected the number of respondents who say they are of some "other" race.

### 3.4. Questionnaire and Measurement of Smoking Prevalence

The ADHS Adult Tobacco questionnaire utilizes several standardized measures of tobacco use and attitudes towards tobacco developed by the CDC. In general, the survey assesses tobacco use and attitudes, including: Smoking Prevalence and Tobacco Use History, Smokeless Tobacco Use Prevalence, Purchase Patterns, Quitting Behavior, Interactions with a Medical or Dental

Providers, Exposure to Environmental Tobacco Smoke, Attitudes toward Smoking and Tobacco Restrictions, Perception of Health Risks, Exposure to Media Sources, and Attitudes toward Tobacco Industry Practices.

In addition to these broad areas, the 2005 ATS included additional questions to assess worksite smoking exposure and policies, and several items to assess the impact of the revision of Arizona's tobacco tax laws.

To measure smoking prevalence, the ATS utilizes the two standard screening measures developed by the CDC. These measures categorize respondents as current smokers, former smokers, or never-smokers. To qualify as a current smoker, respondents have to indicate that they have smoked at least 100 cigarettes in their lives and smoke "everyday" or "some days" at the time of the interview. Former smokers are defined as having smoked at least 100 lifetime cigarettes, but smoke "not at all" at the time of the interview. Never-smokers are defined by having smoked fewer than 100 cigarettes in their lifetime.

### 3.5. *Unweighted Sample Size Numbers for Results in this Report*

The following table provides the unweighted sample size numbers for each major group or subgroup that is reported on in the results. The sample numbers include the total of all possible respondents (including those who refused to answer the question or item, did not know, or had missing data).

*Table 5. Unweighted total sample numbers per each group or subgroup in ATS 2005 report results.*

	<b>1996</b>	<b>1999</b>	<b>2002</b>	<b>2005</b>
Total respondents	6039	4556	6025	6071
Total current smokers	1317	868	1105	961
Total formers smokers	1257	749	1768	1815
Total never smokers	3303	2871	3152	3295
Total under 30 years of age	1172	855	1024	860
Total with income less than \$20,000	1239	657	675	1231
Total with less than high school education	604	367	339	230
Total unemployed	2461	1919	2579	1238
Total currently employed	3568	2624	3433	4743
Total with no health insurance	NA*	NA	NA	540
Total who made a quit attempt (quit for at least one day)	NA	NA	444	407
Total who saw a medical provider in past 12 months	NA	NA	4528	4757
Total current smokers saw medical provider in past 12 months, and provider advised smoker to stop smoking	455	392	478	405
Total who saw dental provider in past 12 months	3124	2138	3740	4019
Total current smokers who saw dental provider in past 12 months and provider advised smoker to stop smoking	180	125	160	175
Total reporting official workplace policy**	2515	1766	2566	2291
Total at workplace with less than 50 employees	1144	1495	1269	1871
Total who work indoors**	2665	1888	2690	2508
Total with friend or family member who smokes	NA	NA	NA	5599
Total with friend or family member who chews	NA	NA	NA	3586
Total smokers with children over five years old	NA	NA	NA	635
Total who heard of ASHline	NA	NA	NA	2582

\* NA = Not applicable, was not asked in this year.

\*\* Slightly different question wording between 1996, 1999, 2002, 2005

## 4. Smoking Prevalence

### 4.1. Overall Smoking Prevalence

Nearly one in five (19%) adult residents of Arizona currently smokes. There are approximately 838,000 adult smokers, based on the 2005 population estimates for adult Arizona residents<sup>1</sup>. Of these, 82 percent report smoking every day, and 18 percent some days, which is similar to the national rates reported from the National Health Interview Survey, 2004 (81%, and 19%, respectively). The smoking prevalence rates appear to have declined overall from 1996 (24%), when the first Arizona Adult Tobacco Survey was administered. A similar trend is shown for the last three Arizona Behavioral Risk Factor Surveys (AZ BRFS, another statewide phone-based survey that includes tobacco use questions) and the findings from the current national estimate of smoking prevalence for adults, based on the Center for Disease Control's Behavioral Risk Factor Surveillance System (BRFSS), which also show slight decreases in national adult smoking prevalence. However, the slight differences between surveys and over years between surveys should not be over interpreted, i.e. a one percent change could as well be due to variations in methodology, not necessarily a "real" change in smoking behavior. See Figure 1.

Figure 1. Adult smoking prevalence trends 1995-2005: Arizona and National estimates

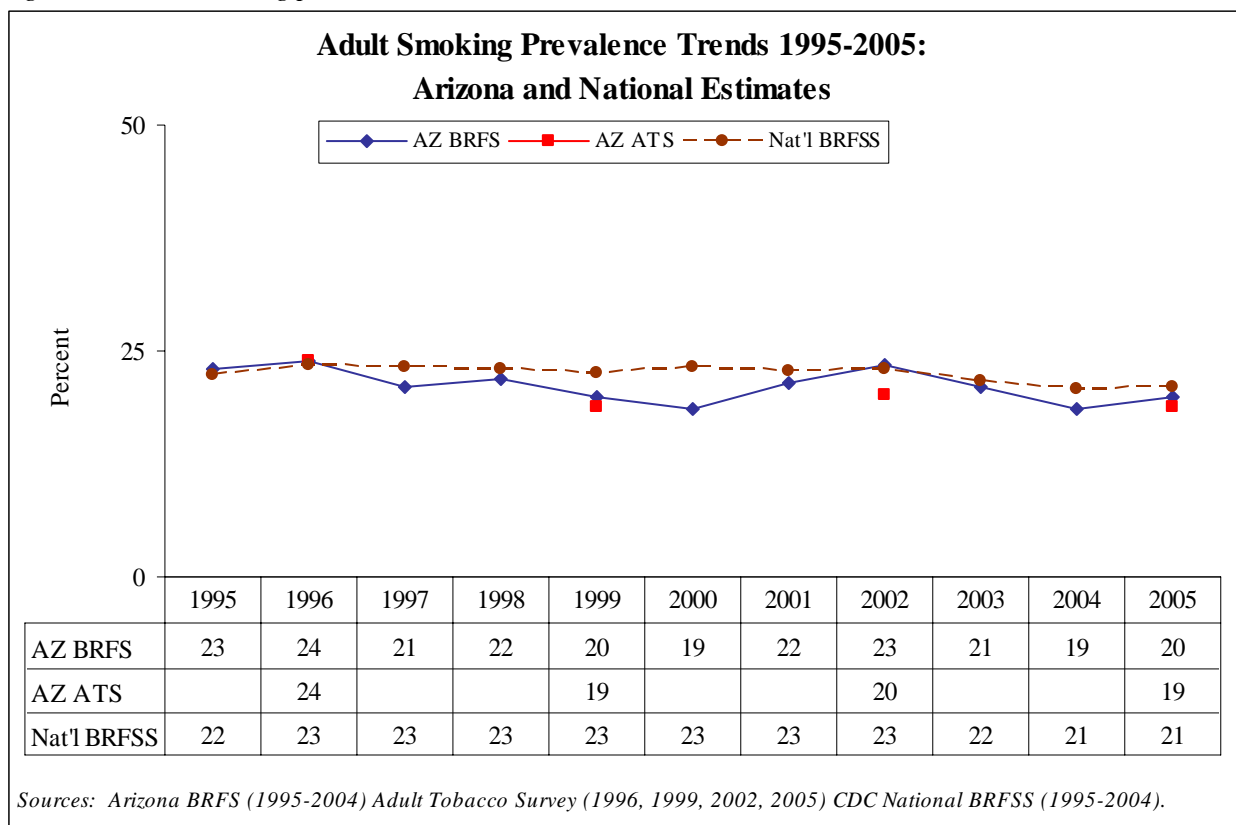
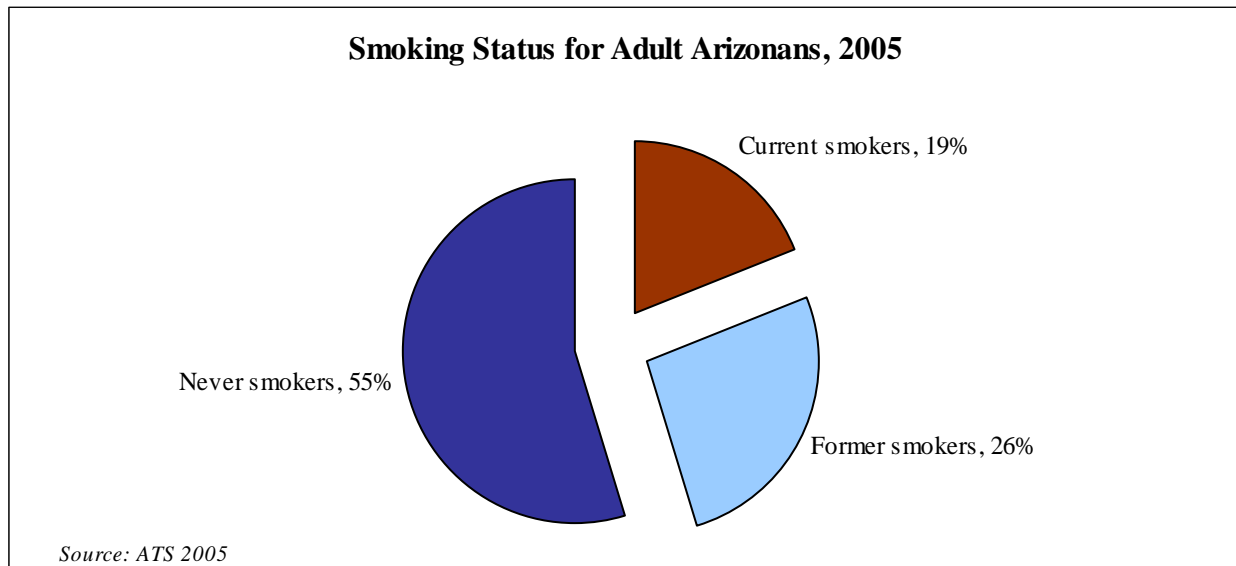


Figure 2 shows the distribution of Arizonans' smoking status, that is, whether the respondent is a "never smoker" (has smoked less than 100 cigarettes in one's lifetime and does not currently smoke); a "former smoker" (has smoked 100 cigarettes or more in one's lifetime and does not currently smoke); or a "current smoker" (has smoked 100 cigarettes or more in one's lifetime

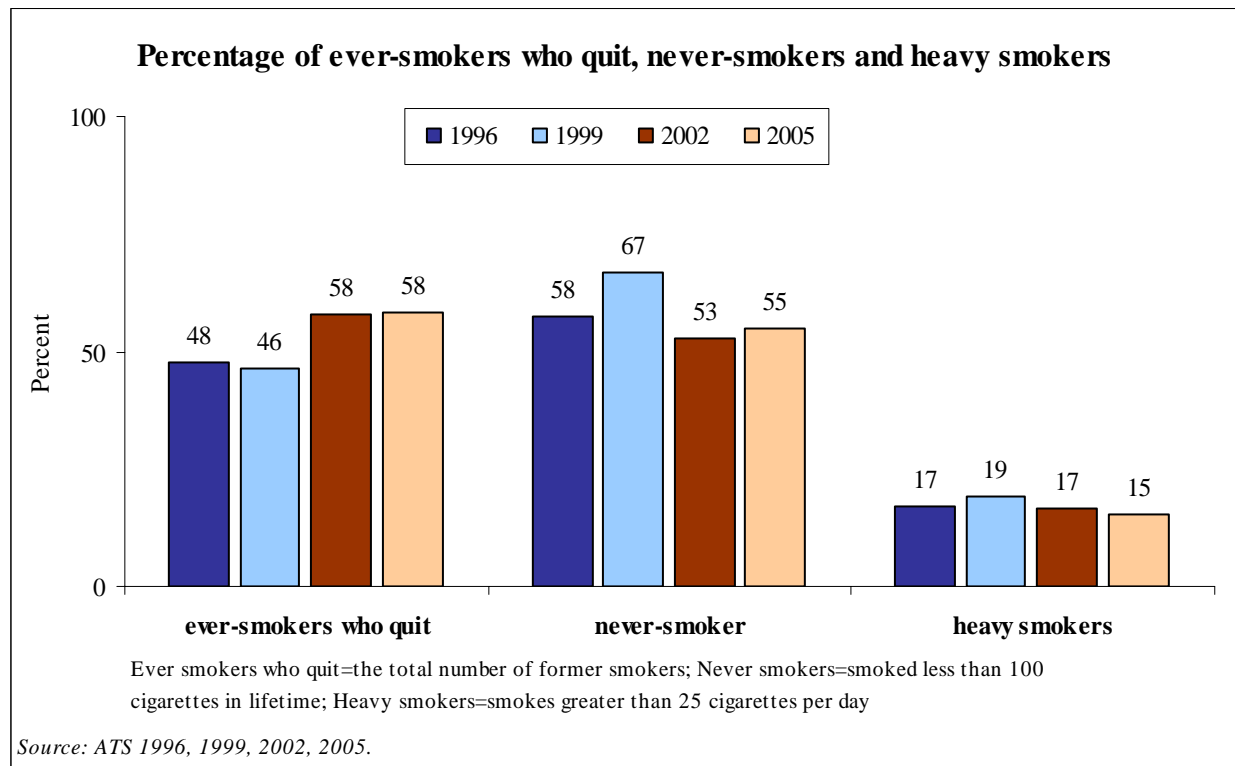
and currently smokes). A slight majority (55%) are never smokers, 26 percent are former smokers, and 19 percent are current smokers.

Figure 2. Smoking status for adult Arizonans, current, former, and never smokers ATS 2005



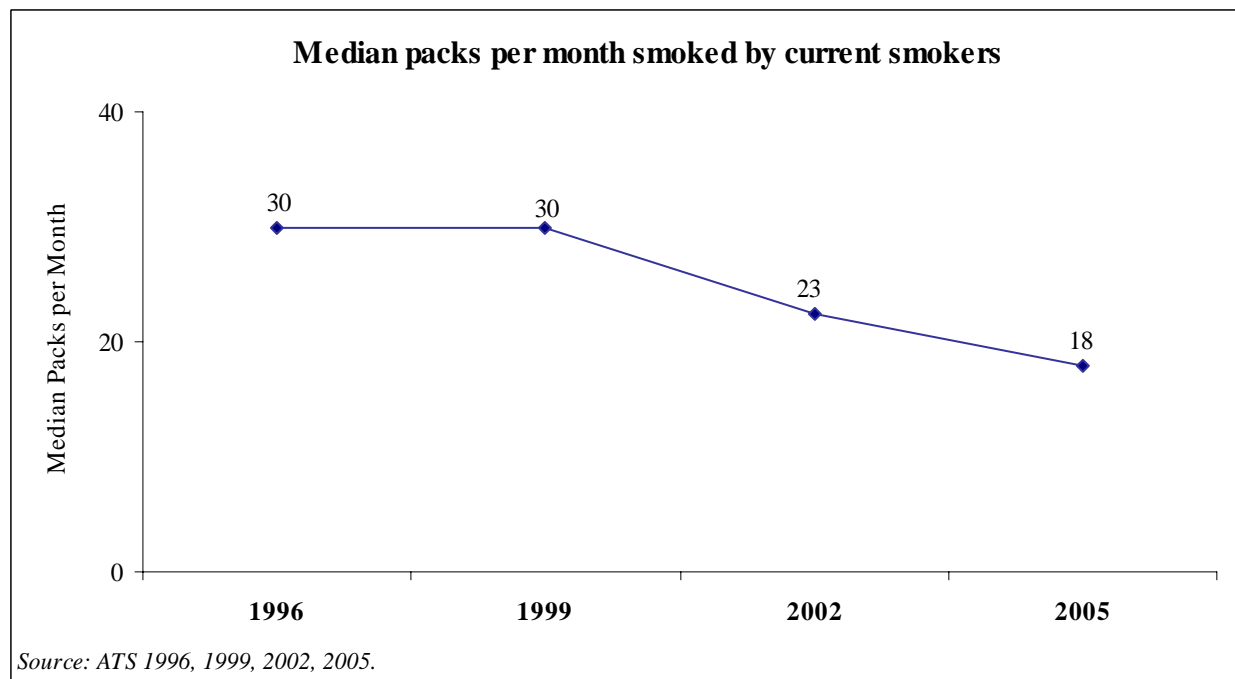
In addition to looking at the smoking prevalence rate over time, it is worthwhile to examine other indicators of changes in smoking behavior over time. For instance, an increase in the percentage of ever smokers who report having quit (former smokers) and in the percentage of the adult population who report never smoking, would suggest movement towards a non-smoking population. A decrease in the percentage of heavy smokers (those who smoke 25 cigarettes or more per day) in the smoking population would suggest that inroads are being made amongst even the most addicted smokers. Figure 3 shows that the percentage of former smokers has increased since 1996, but that little change is noted from 2002 to 2005. The percentage of never smokers and of heavy smokers has also stayed about the same from 2002 to 2005, but with slight movement in the positive direction (increasing never smokers and decreasing heavy smokers).

Figure 3. Percentage of ever smokers who quit, never smokers and heavy smokers, ATS 1996-2005



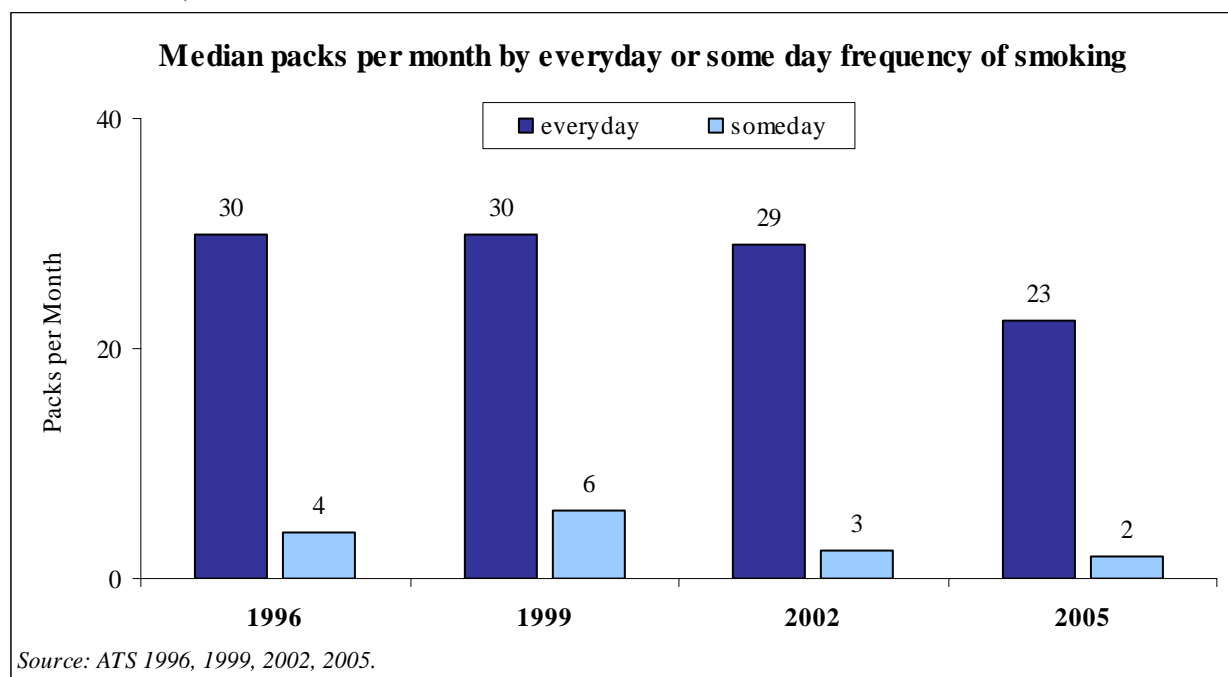
Current smokers' consumption of cigarettes continues to decline, from a median of 30 packs per month in 1996 to a median of 18 packs per month in 2005 (Figure 4).

Figure 4. Median packs per month smoked by current smokers, ATS 1996-2005



Cigarette consumption has decreased amongst both smokers who report smoking every day and those who report smoking only some days. For every day smokers, the median number of packs smoked per month decreased by six packs from 2002 to 2005. For some day smokers, the median number decreased by nearly a pack from 2002 to 2005. See Figure 5.

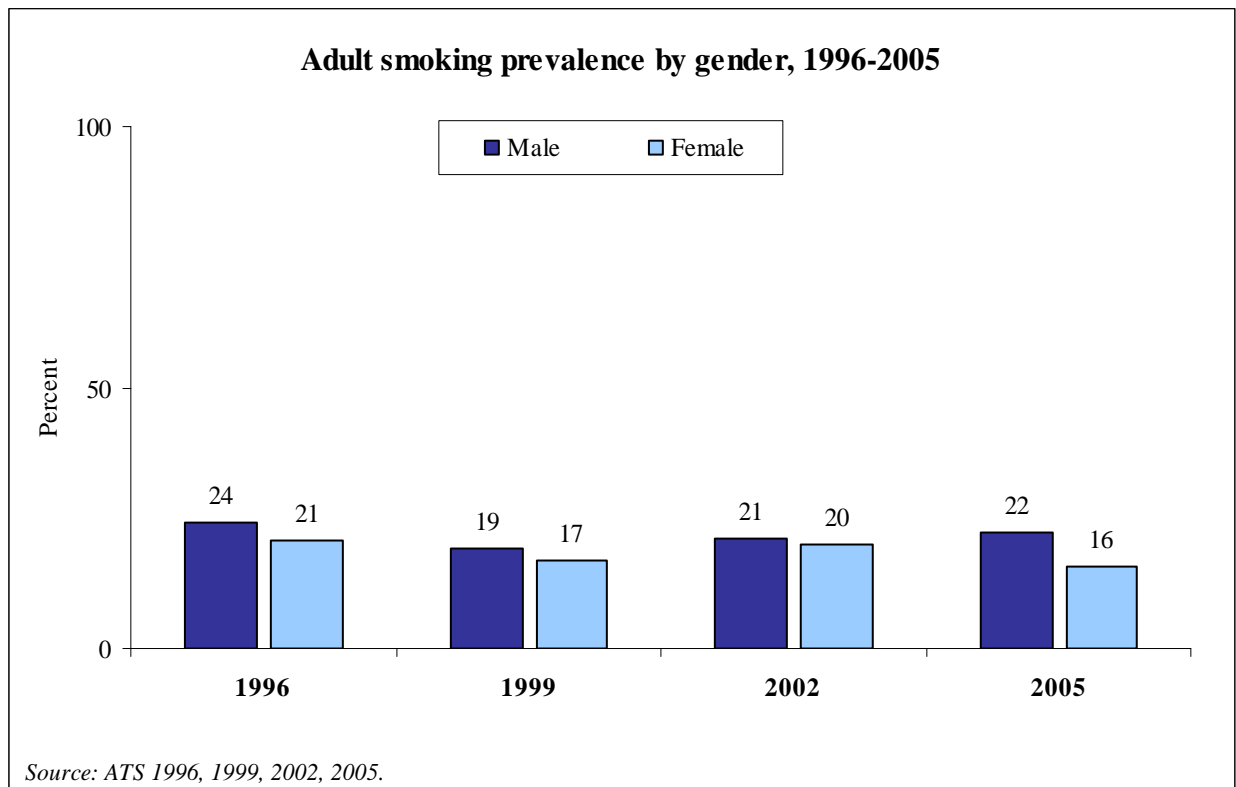
*Figure 5. Median packs per month by every day or some day frequency of smoking (ATS 1996, 1999, 2002, and 2005).*



#### **4.2. Smoking Prevalence and Consumption by Gender**

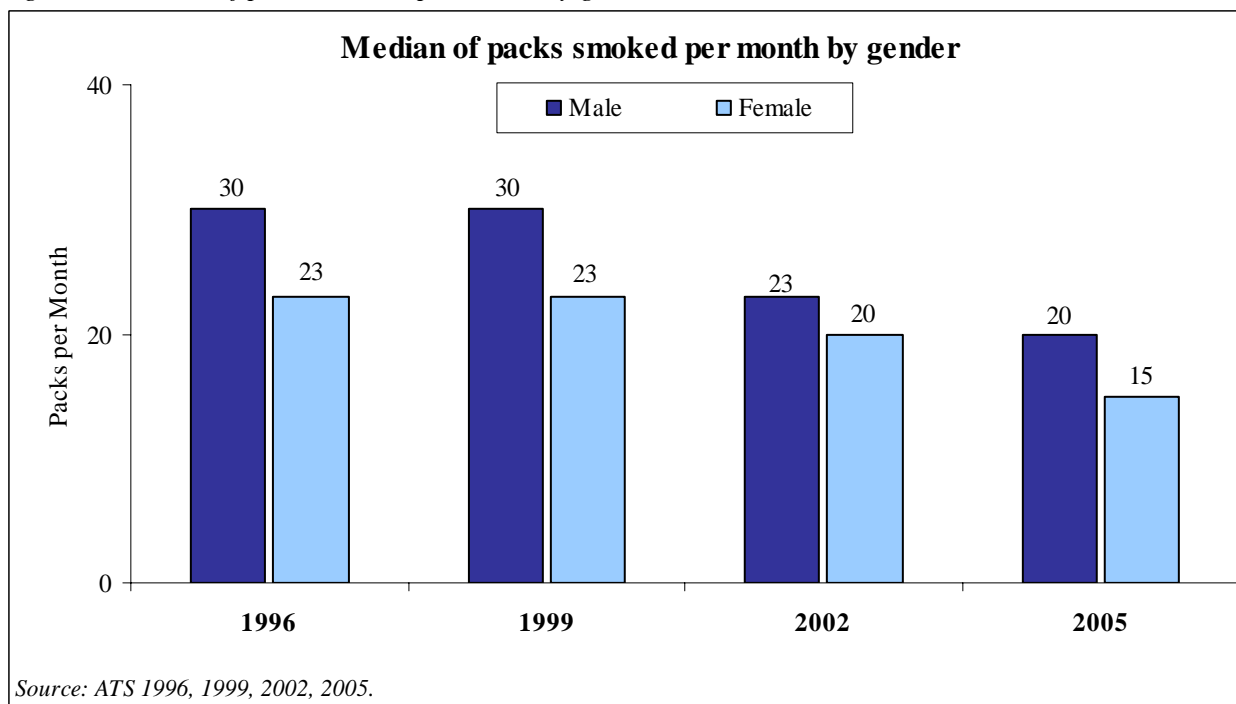
Both male and female smoking prevalence rates have declined from their highest rates in 1996, though male smokers' rates have shown slight increases in 2002 and 2005. See Figure 6 below. Arizona's rates for both adult males (22%) and females (16%) are lower than the most recent national prevalence rates from the 2004 National Behavioral Risk Factor Survey: 23 percent for males and 19 percent for females.

Figure 6. Adult smoking prevalence by gender. (ATS 1996, 1999, 2002, and 2005)



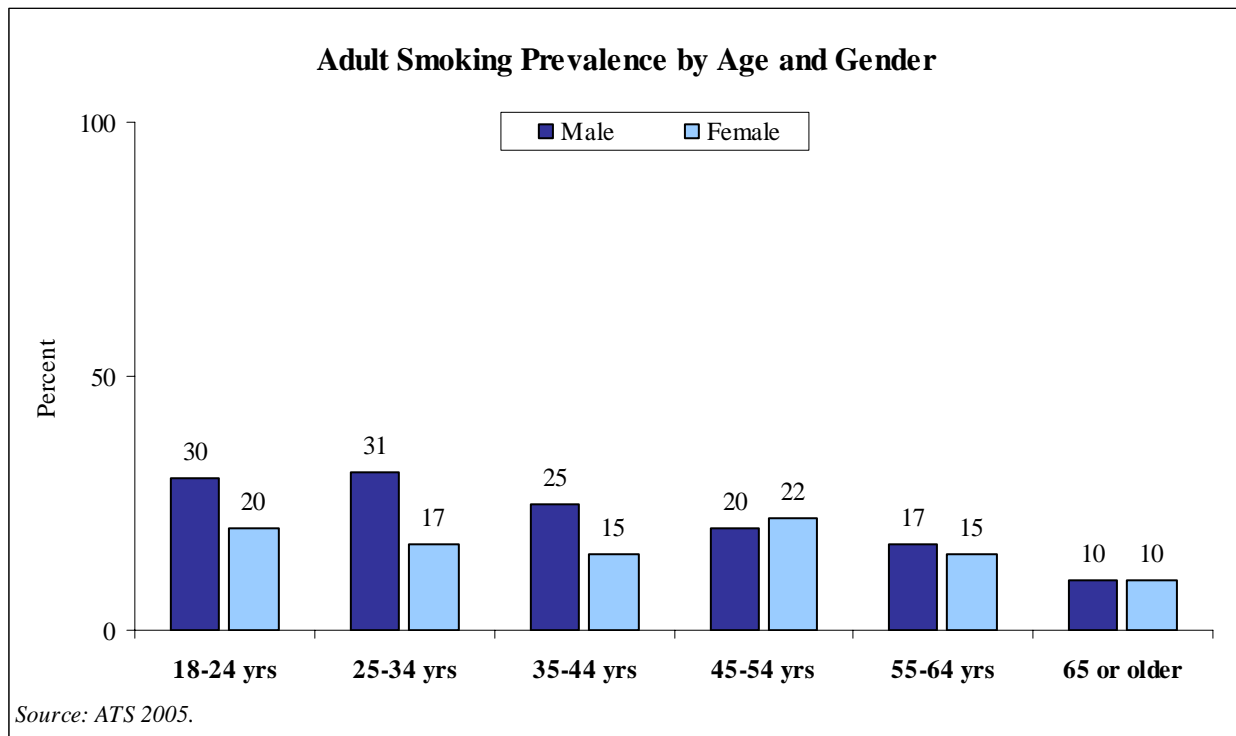
Gender differences in the rates of smoking consumption are also evident in each year of the ATS results. Males consistently show higher consumption rates than females (see Figure 7 below).

Figure 7.. Median of packs smoked per month by gender, ATS 1996, 1999, 2002, and 2005.



The gap between males and females in Arizona smoking prevalence tends to diminish with age. Male smokers have higher prevalence rates than females when they are younger: about 30 percent prevalence for male 18-34 years olds versus less than 20 percent for females. However, smoking declines for males as they age, closing the disparity between females and males. See figure 8 below. This trend also is evident in the previous years of the ATS (1996, 1999, and 2002) and mirrors national trends.

*Figure 8. Adult smoking prevalence by age and gender (ATS 2005).*

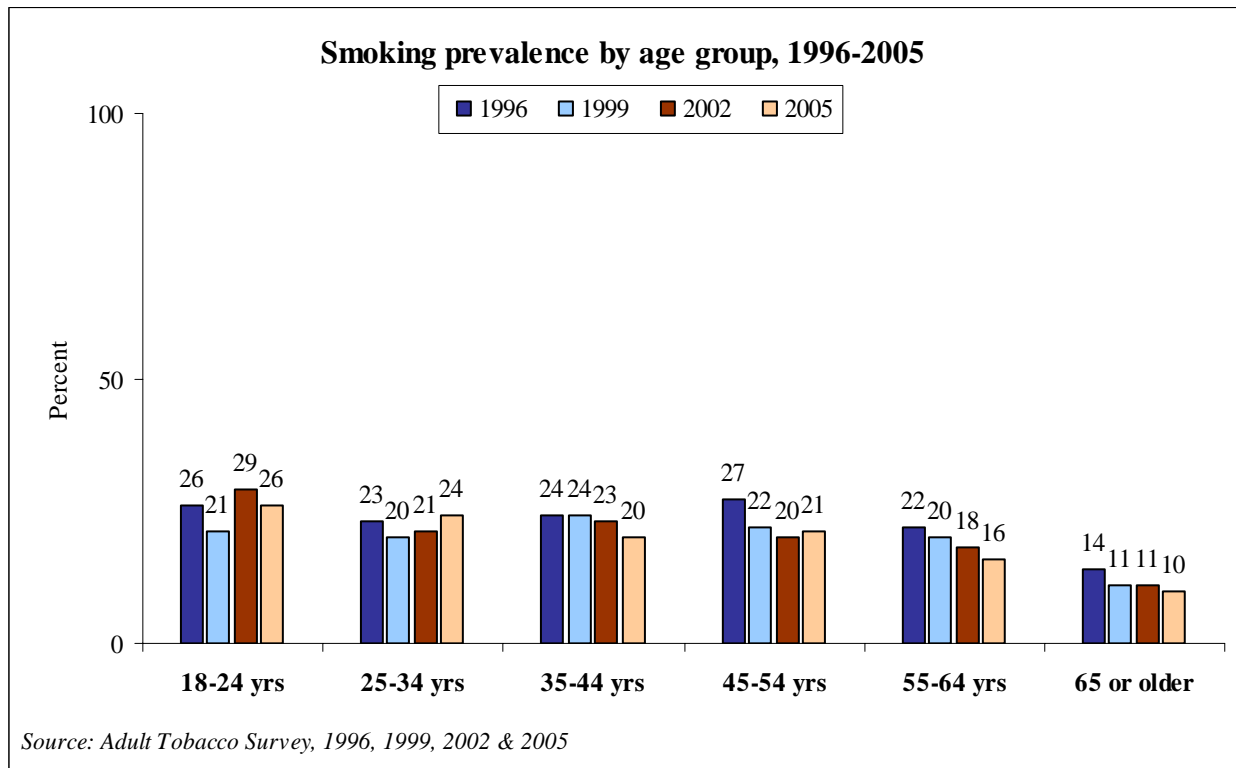




### 4.3. Smoking Prevalence and Consumption by Age

When smoking prevalence is examined across age groups, for each year of ATS administration (1996-2005), the younger age groups tend to have higher smoking rates (18-54 yrs old) and the older age groups (55 years or older) tend to have the lowest rates. All of the age groups either declined from 2002 to 2005, or stayed stable, except for the 25-34 year old group, which increased from 21 percent in 2002 to 24 percent in 2005. See Figure 9.

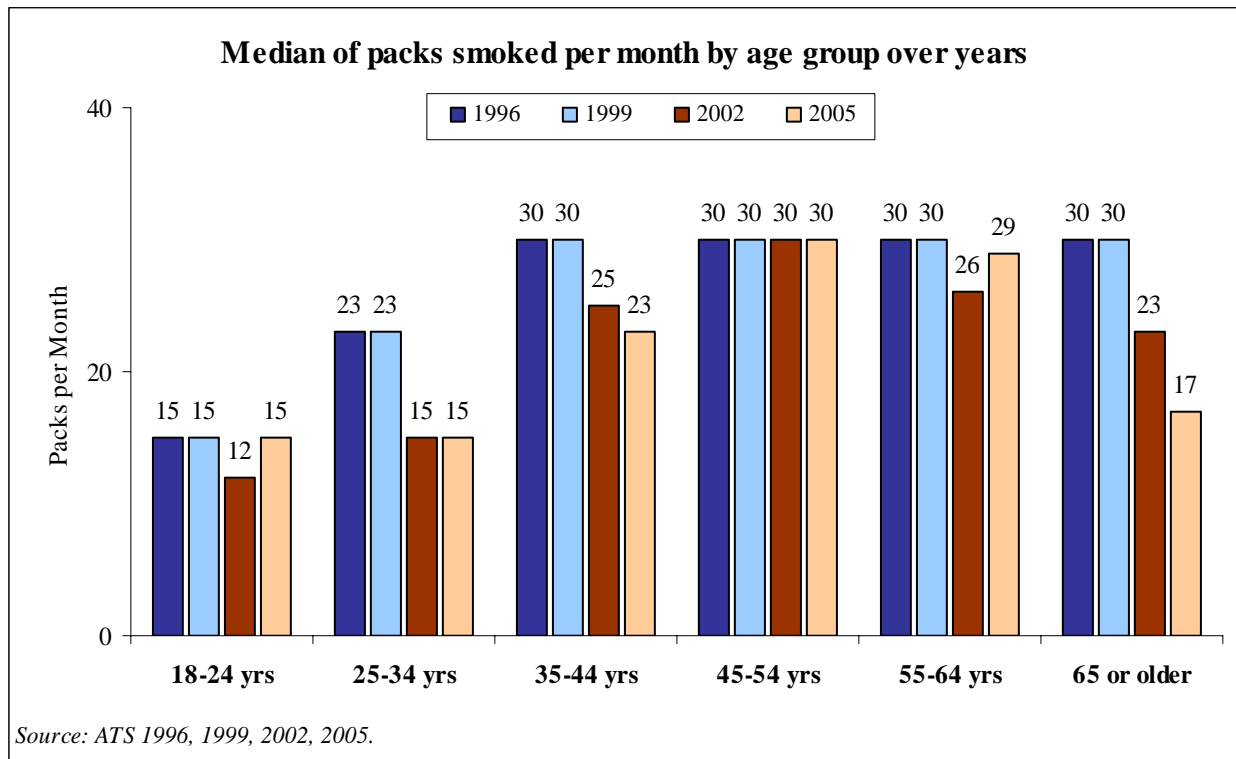
Figure 9. Adult smoking prevalence by age group (ATS 1996, 1999, 2002, and 2005)



Across all the age groups, most report smoking *every day* in the last 30 days. While older age groups tend to have a lower percentage of smoking every day, there is a higher percentage, starting at age 35 and older, that report smoking every day in the last month. There are also increases in every day smoking for the age groups of 18-24, 55-64, and 65 and older.

While every day smoking tends to increase over the age of smoker, the graph below shows that the *amount* smoked or packs consumed per month has decreased for the 65 years and older age group. There are also decreases in consumption from 1999 to 2005 for the 25-34 year olds and the 35-44 year olds.

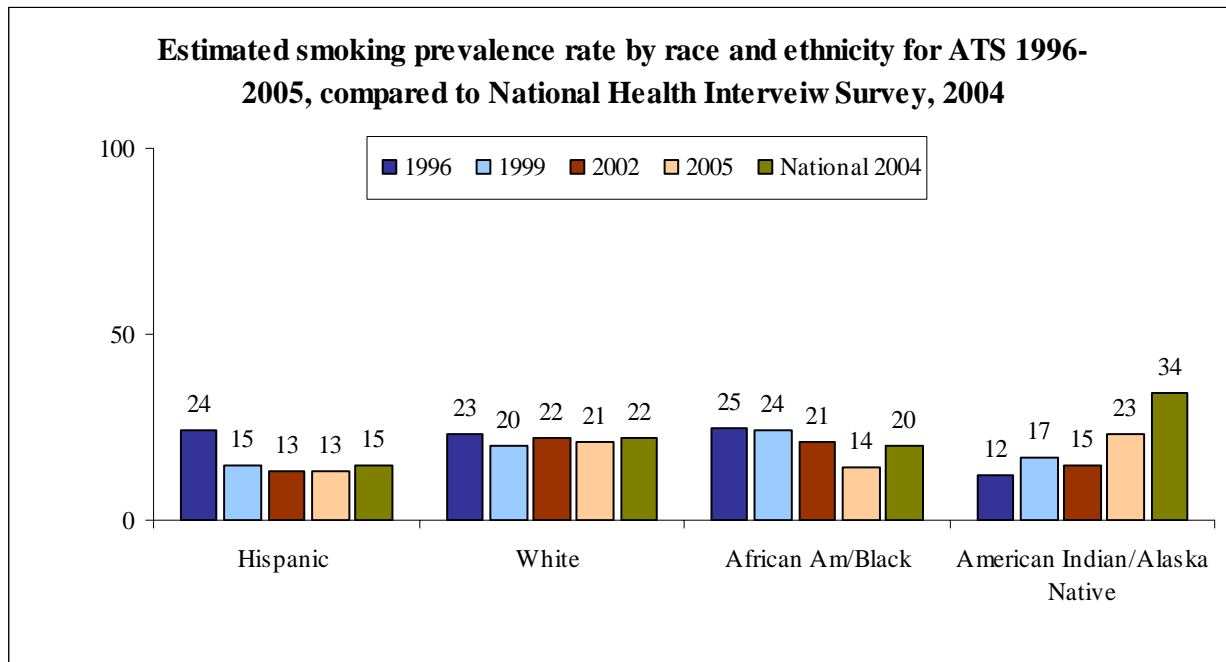
Figure 10. Median of packs smoked per month by age group over years (ATS 1996, 1999, 2002, & 2005).



#### 4.4. Smoking Prevalence by Race/Ethnicity

Figure 11 shows the smoking prevalence rates by ethnicity and race for Arizona adults. White respondents in 2005 continue to have the highest smoking prevalence rate (21%) compared to the other racial and ethnic groups (except for American Indians with a rate of 23%). The racial and ethnic group estimates have stayed fairly stable over time, especially for Whites, and are comparable to the rates from the National Health Interview Survey, 2004<sup>2</sup>. There are two notable exceptions, and these are for African Americans, American Indians and the “Other” category. Those who marked “Other” race are not reported in the graph due to low numbers. African American 2005 prevalence rates show a decrease from 21 percent in 2002 to 14 percent in 2005. The national estimates are 20 percent. American Indian prevalence rates show an increase from 15 percent in 2002 to 23 percent in 2005 in Arizona, although this rate is still much lower than the national 2004 estimate of 34 percent. The estimates for the African American, American Indian samples are considered unstable due to the smaller numbers in the sample (less than 150 people), and thus may not be representative of these groups in Arizona.

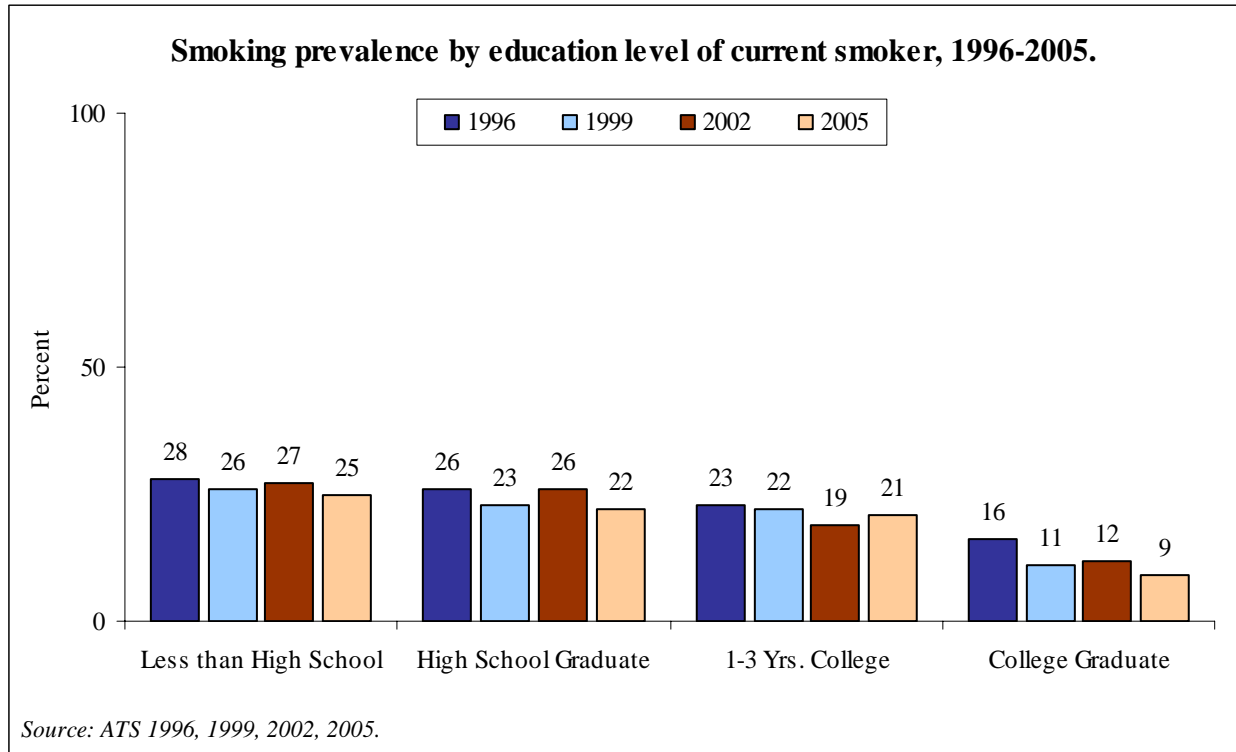
Figure 11. Estimated smoking prevalence by race and ethnicity for ATS 1996, 1999, 2002, and 2005 compared to the National Health Interview Survey, 2004.



#### 4.5. *Smoking Prevalence by Education Level*

The 2005 Arizona smoking prevalence rates decrease with increasing respondent education levels, from a high of 25 percent amongst those reporting less than a high school education to a low of nine percent amongst college graduates (Figure 12). This pattern has been consistent over all years that the survey has been administered. There have been decreases since 1996 across all education levels, though the decrease has been the most pronounced among the most highly educated.

Figure 12. *Smoking prevalence by education level of current smoker, ATS 1996, 1999, 2002, and 2005.*



#### 4.6. Socio-economic Indicators and Smoking Status

Adult current smokers were compared to adult non-smokers on the following indicators of low socio-economic status: annual income less than \$20,000, education less than high school, not currently employed, and no health insurance. Smokers tend to show higher rates on all of these indicators when compared to adult non-smokers in the survey (the term “non-smokers” includes both former and never-smokers), as well as to the general population of Arizonans (See Table 6).<sup>3</sup>

Table 6. Comparison of adult non-smokers with current smokers on socio-economic indicators, ATS 2005.

Socioeconomic Indicator	Non-Smokers	Current Smokers	Arizona Population
Annual Income under \$20,000	28%	35%	22%
Education less than High School Graduate/GED	18%	25%	19% *
Not currently employed	3%	9%	5% **
No health insurance	12%	23%	17% ***

\*age 25 and older, U.S. Census Bureau, Census 2000

\*\*age 16 and older, Arizona Department of Economic Security, Labor Force and Nonfarm Employment, 2005

\*\*\*U.S. Census Bureau, Current Population Survey 2002 to 2004 Annual Social and Economic Supplements

A similar comparison was made between non-smokers, former smokers, and adult current smokers on the following health indicators: overall health status reported as fair or poor, physical, mental or emotional disability, asthma medical diagnosis, chronic obstructive pulmonary disorder (COPD), diabetes, and heart disease. A higher percentage of smokers report a fair or poor health status (18%) when compared to former smokers (16%), and non-smokers (11%). However, for the remaining health indicators, former smokers either have a higher percentage than current smokers and non-smokers or the percentage is the same.

Table 7. Comparison of adult non-smokers, former smokers with current smokers on health indicators, ATS 2005.

Health Indicator	Non-Smokers	Former Smokers	Current Smokers
Health status is reported as fair or poor	8%	16%	18%
Physical, mental or emotional disability	14%	27%	24%
Asthma medical diagnosis	15%	19%	16%
COPD medical diagnosis	5%	12%	12%
Diabetes medical diagnosis	7%	11%	6%
Heart disease diagnosis	5%	15%	6%

## 5. Smokeless Tobacco Use

Overall, about 13 percent of ATS 2005 respondents (N=6071) reported having ever tried smokeless tobacco products, and about two percent of respondents reported current every day or some day use of smokeless tobacco. About 88,700 adults are estimated to be smokeless tobacco users based on Arizona adult population estimates for 2005. These estimates indicate that smokeless tobacco use by Arizonans has remained low but fairly stable for these years, in all

three ATS years about two percent. This estimate for adult use of smokeless tobacco in Arizona is lower than the national estimate of three percent<sup>4</sup>.

There is a substantial gender difference in smokeless tobacco use amongst adults; about 89 percent of current smokeless tobacco users are males and only 11 percent are females. The Arizona prevalence estimate is four percent for males and one percent for females. The national estimates are higher for males, six percent, and somewhat lower for females, 0.3 percent<sup>5</sup>. Nearly 80 percent of Arizona current smokeless users were between the ages of 18 and 44 years old.

Current users reported using an average of one tin or pouch of smokeless tobacco per day in the past 30 days. Current users also report that in the past 30 days, they chewed or dipped on average 20 days. About 36 percent of current smokeless tobacco users reported making a quit attempt in the past 12 months, compared to 46 percent of current cigarette users.

## **6. Smoking Cessation**

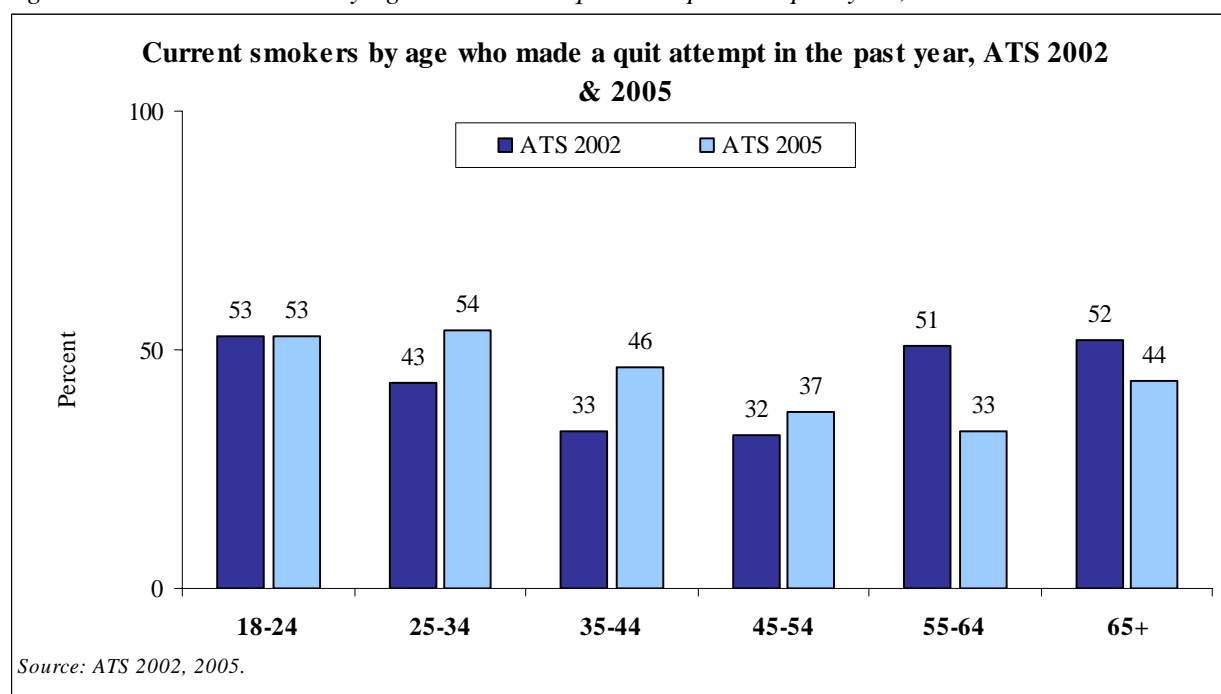
### ***6.1. Smokers Who Made Quit Attempts in Past Year by Age and Gender***

Forty-six percent (46%) of current smokers reported on the ATS 2005 that they had tried to quit for 24 hours or longer during the past year. This percentage is slightly higher than the 43 percent reported by current smokers in 2002.

The trends from 2002 to 2005 show a different pattern of quit attempts per age group. In 2002, both young adult smokers, those between the ages of 18 and 34, and older adult smokers 55 and older were more likely to report a quit attempt in the past year (quit attempt rates above 50%). However, in 2005, there is a decrease in the percentage of quit attempts for the older adult smokers, but increases for the middle age groups (ages 35-54). The youngest age groups show similar or higher quit attempt rates. See Figure 13.

In 2005, 47% of female adult smokers made at least one quit attempt in the past year. Male adult smokers show a similar, but slightly lower rate of 45 percent.

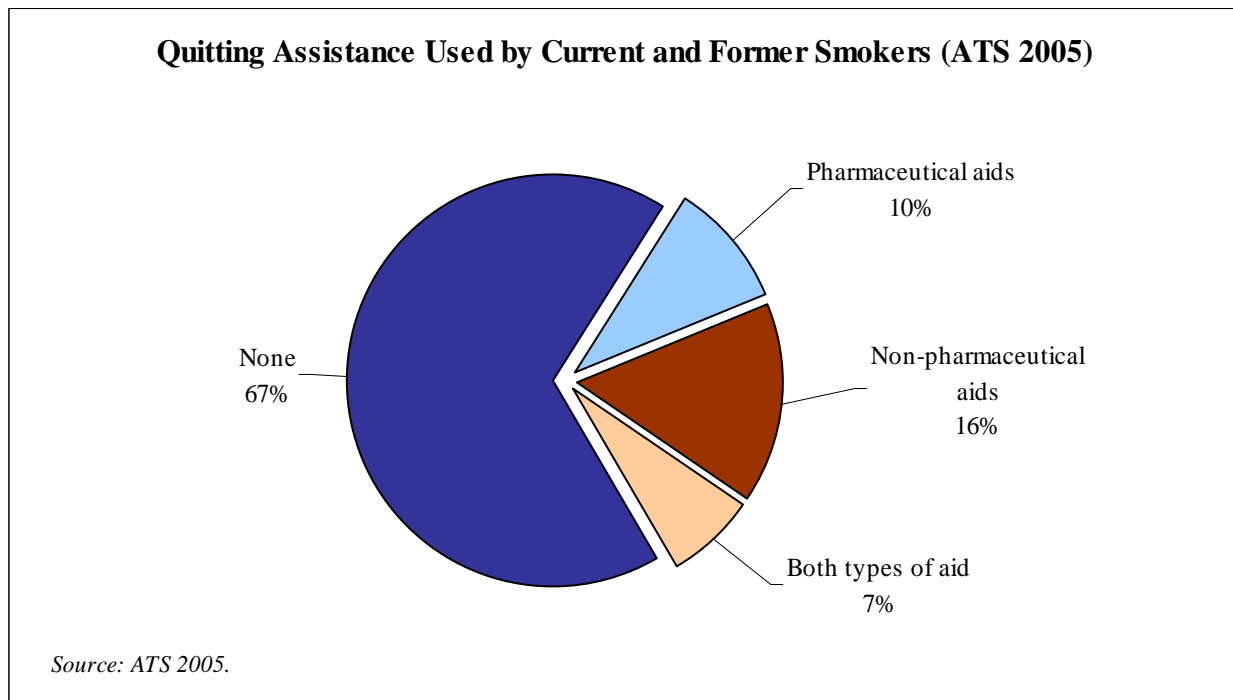
Figure 13. Current smokers by age who made a quit attempt in the past year, ATS 2005.



## 6.2. Types of Assistance Used to Quit

Both adult current smokers (for their last quit attempt) and former smokers (when they last quit for good) were asked about the types of assistance they reported using to help them quit. Thirty-two percent (32%) of current and former smokers reported using some type of assistance, either pharmaceutical or non-pharmaceutical aids, to help them quit. Figure 14 shows the breakdown of the types of assistance used compared to using no assistance for a quit attempt. Ten percent (10%) of those who made quit attempts used pharmaceutical assistance only (e.g., nicotine patch, nicotine gum, Zyban), 16 percent used non-pharmaceutical assistance, and seven percent used both pharmaceutical and non-pharmaceutical aids. The percentage of those who used some form of pharmaceutical aid in 2005 (17%) is down from the rate of 23 percent reported in 2002.

Figure 14. Quitting assistance used by current and former smokers, ATS 2005



There are many forms of non-pharmaceutical assistance available to help smokers quit. In 2005, of those who reported using non-pharmaceutical aids, 33 percent reported using self-help materials, followed by 24 percent who used one-on-one counseling. The next most frequently reported assistance was some type of social support at 16 percent (e.g. girlfriend nagging, mother, children). Nearly 15 percent reported using a non-pharmaceutical substitute (e.g. gum, candy, pacifiers, fake cigarettes). Less than 5 percent reported either internet counseling, acupuncture, self-motivation/cold turkey, or being in a setting that restricted smoking (e.g. work, hospital, or prison). (Table 8).

Table 8. Types of non-pharmaceutical assistance used by current and former smokers, ATS 2005.

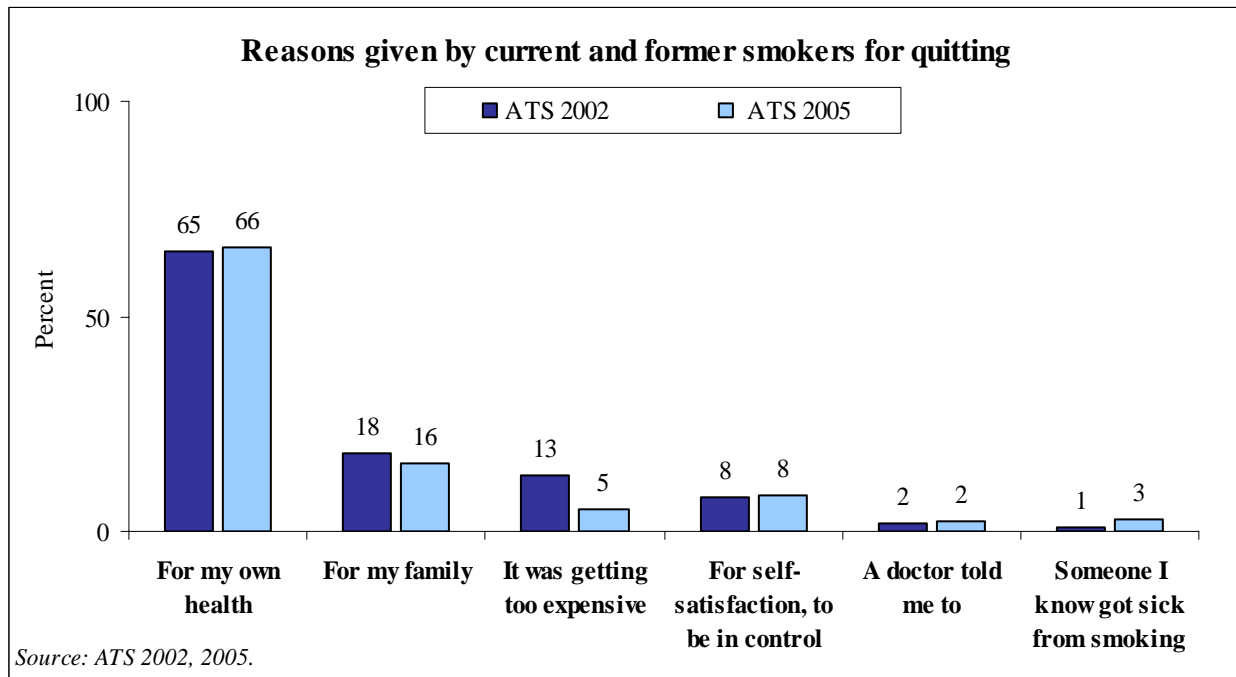
Non-pharmaceutical Aids	N (total N=213)	Percent
Self-help material	71	33.2
One-on-one counseling	52	24.4
Social support	35	16.4
Non-pharmaceutical substitute	31	14.7
Stop smoking clinic or class	28	13.2
Hypnosis	25	11.9
Telephone helpline	23	10.7
Internet counseling	8	3.9
Acupuncture	6	2.9
Self-motivation/ cold turkey	5	2.5
Smoking restricted setting	3	1.3



### 6.3. *Reasons for Quitting*

Of the smokers who attempted to quit, 66 percent cited “for my own health” as their reported reason for quitting. The next most cited reason was “for my family” (16%). The pattern of responses is very similar to what was reported by smokers attempting to quit in 2002, with some slight variations. Of particular interest is the percentage for “it was getting too expensive,” which shows a decrease of 13 percent in 2002 to five percent in 2005.

Figure 15. Reasons given by current and former smokers for quitting, ATS 2002 and 2005.



### 6.4. *Future Intentions to Quit*

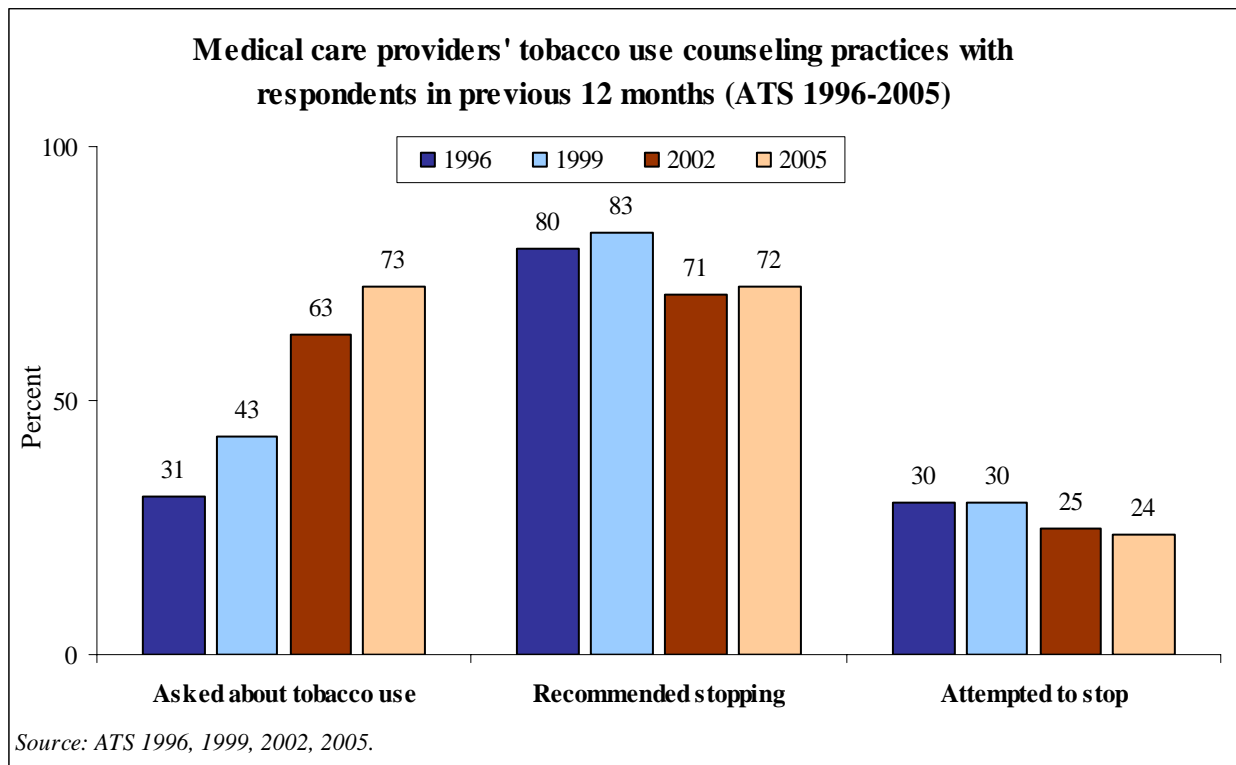
Two new questions were added in 2005 to assess smokers’ intentions to quit in the next six months and in the next 30 days. Sixty-one percent (61%) of current smokers reported that they are seriously considering stopping smoking within the next six months and 21 percent report planning to stop in the next 30 days.

## 7. Medical and Dental Provider Counseling

### 7.1. Medical Provider Counseling Practices with Smokers

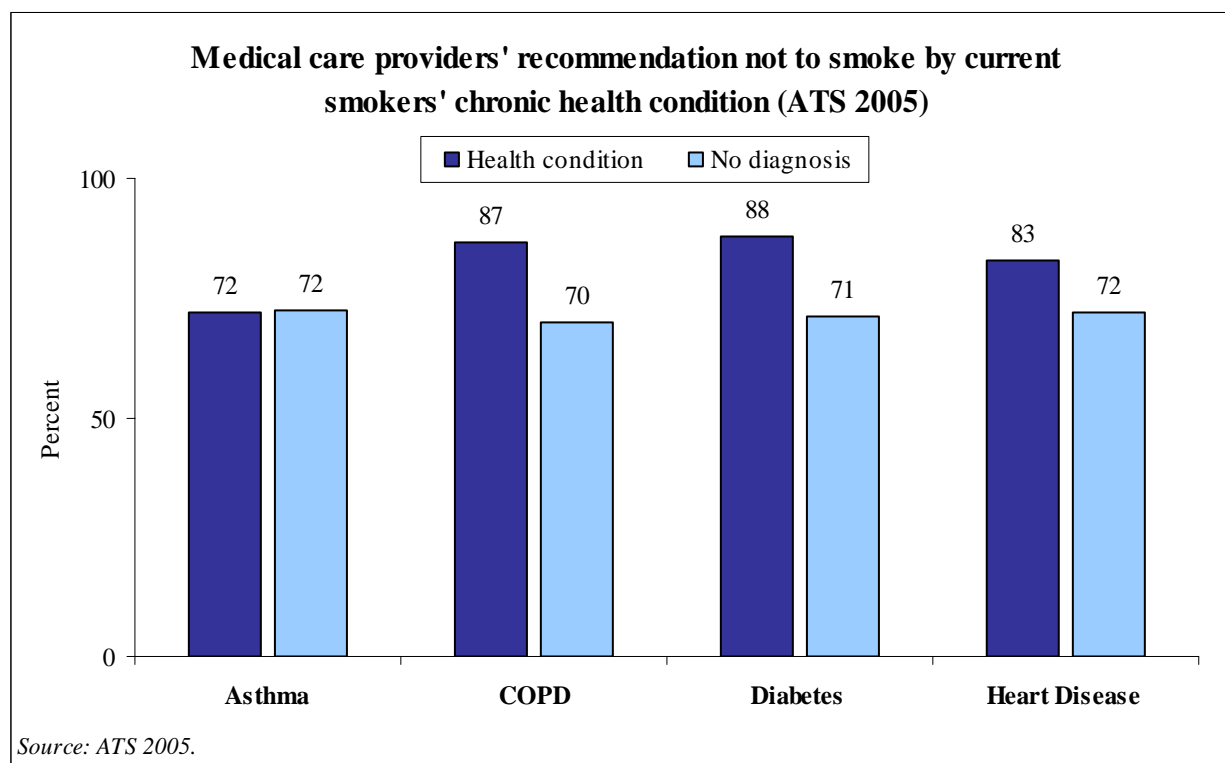
Seventy-four percent (74%) of all ATS 2005 respondents saw a medical provider in the 12 months prior to their survey participation. Figure 16 shows a consistent increase in percentage from 31 percent in 1996 to 73 percent in 2005 of those who were asked by their medical provider if they used tobacco. The same figure shows that the majority of smokers are advised by their medical provider to stop using tobacco, and that when smokers are advised, nearly one-quarter of them attempt to stop smoking. There are lower percentages shown in 2002 and 2005 for medical providers' recommendations to stop (71% and 72%, respectively), as compared to the respective levels in 1996 and 1999 (80% and 83%). The rates of those who attempted to stop have also declined from the 1996 and 1999 levels.

Figure 16. Medical care providers' tobacco use counseling practices with respondents in previous 12 months, ATS 1996, 1999, 2002, and 2005.



Current smokers with a medical diagnosis of COPD, diabetes, and heart disease report being advised more frequently by their medical provider to quit smoking than do those without those conditions. There is no difference in frequency of advice-giving among those smokers with or without an asthma diagnosis (Figure 17).

*Figure 17. Medical care providers' recommendation not to smoke by current smokers' chronic health condition, ATS 2005.*



## **7.2. Relationship Between Quit Attempts and Medical Provider Counseling**

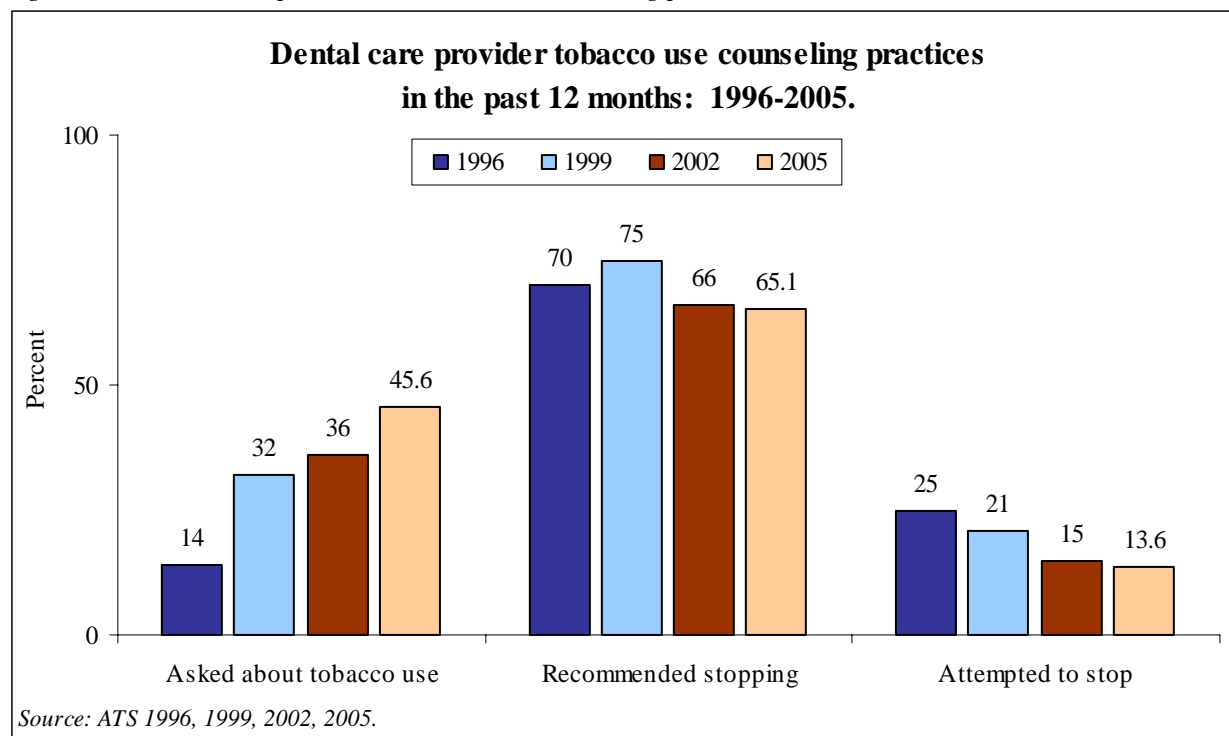
When smokers are advised by their medical provider to stop smoking, about 51 percent report being offered cessation assistance such as medication, information about classes, materials, or being urged to set a quit date. This rate is similar to what was reported in 2002 (50%).

## **7.3. Dental Care Provider Counseling Practices with Smokers**

About 62 percent of all respondents saw a dental provider in the past year. Figure 18 shows that dental care providers who ask their patients if they smoke showed a consistent and dramatic increase from 1996 (14%) to 2005 (46%). The same figure shows that of those smokers who are asked about their use, the majority are advised to stop smoking. There is a decrease from 1999 (75%) to 2002 (66%). This finding is similar to the decrease found for medical care provider rates on advising smokers to quit.

When current smokers are advised by their dental care provider to stop smoking, the rates for 2005 show that about 14 percent attempt to stop. These rates are down from those that were reported in 1996 (25%) and 1999 (21%).

Figure 18. Dental care provider tobacco use counseling practices, ATS 1996, 1999, 2002, and 2005.



## 8. Second Hand Smoke

### 8.1. Any Exposure to Second Hand Smoke

Twenty five percent (25%) of all respondents reported exposure to tobacco smoke in either their home or car in the past seven days. Of those respondents currently employed, nearly 40 percent (39.5%) reported exposure to tobacco smoke at home, in their car, or at work.

### 8.2. Household Exposure

Only eight percent of all ATS respondents in 2005 said that they were exposed to tobacco smoke in their home one day or more in the past seven days. This rate is down from the 18 percent reported in 2002.

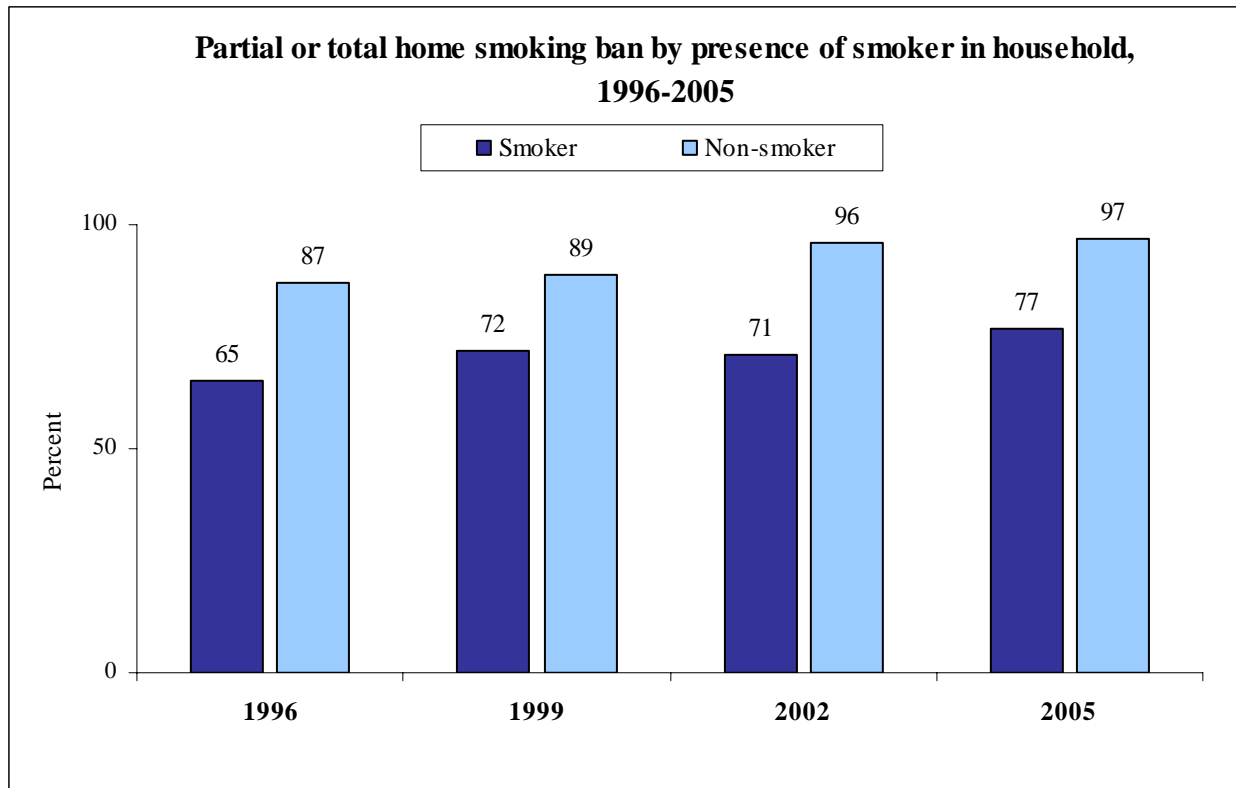
### 8.3. Household Smoking Restrictions

Eighty-seven percent (87%) of all ATS 2005 respondents report having a complete smoking ban in their home (that is, smoking is not allowed anywhere inside their home). A slightly lower percentage of 80 percent was reported in 2002.

In Figure 19, non-smoker and smoker households are compared. The figure shows a higher percentage of non-smokers with home bans or restrictions than smoker households for each year

of the ATS from 1996 to 2005. In 2005, the non-smoker rate was 97 percent compared to 77 percent for smokers. Notably, smoker households with smoking bans or restrictions increased from 71 percent in 2002 to 77 percent in 2005.

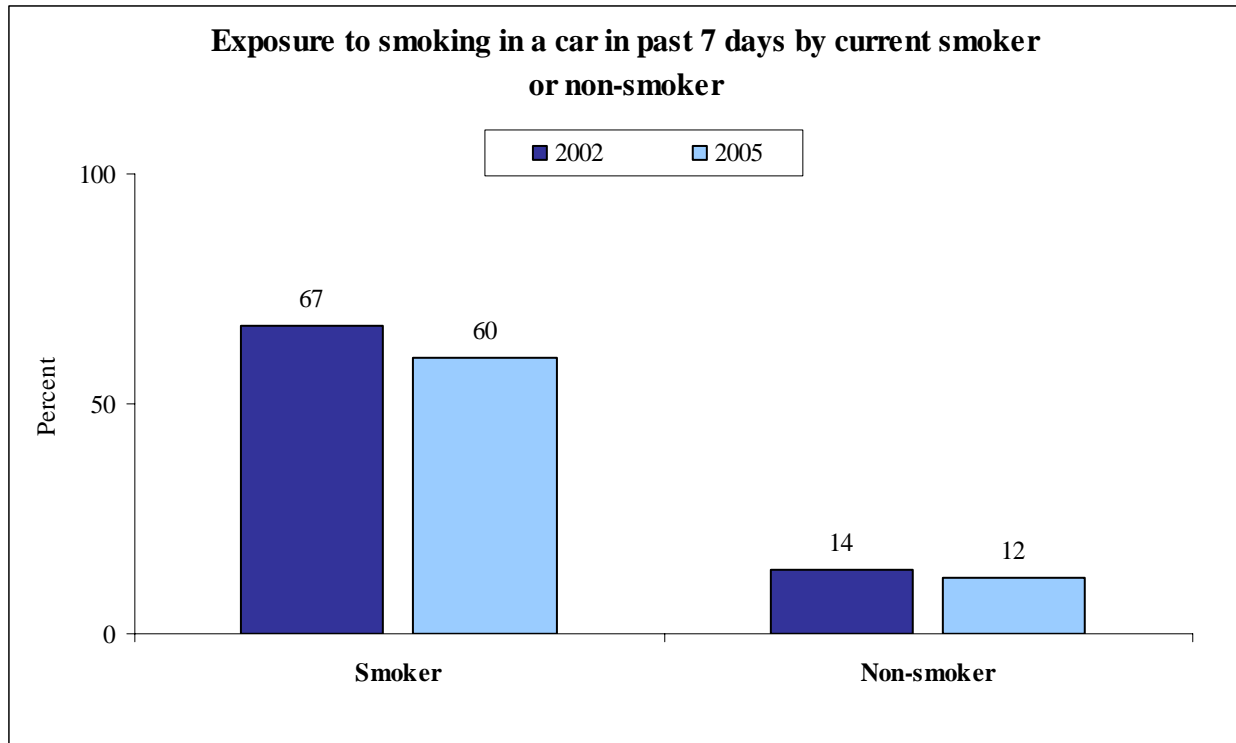
*Figure 19. Household smoking rules by presence of smoker in household: ATS 1996, 1999, 2002, and 2005.*



#### 8.4. *Exposure to Smoking in Cars*

In 2005, 21 percent of all ATS respondents reported exposure to smoking in a car in the past seven days. This is a slight decrease from the 25% of respondents who reported car exposure in 2002. Non-smokers report much lower exposure to smoking in a car than current smokers (for 2005, 12% of non-smokers versus 60% for smokers). However, there is a slight decrease from 2002 to 2005 in reported exposure for current smokers from 67 percent to 60 percent, respectively (see Figure 20).

Figure 20. *Exposure to smoking in a car in the past seven days by current smoker or non-smoker, ATS 2002 and 2005.*



## 9. Workplace Exposure

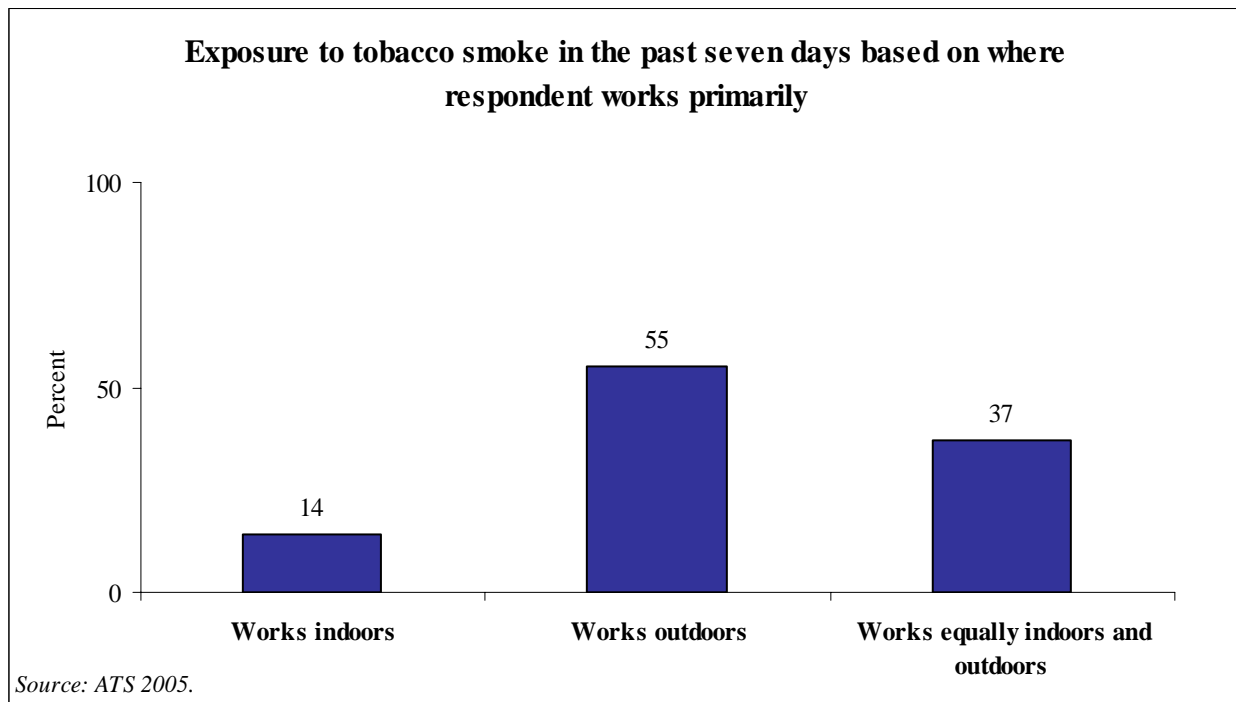
### 9.1. *Employment Status, and Type of Workplace*

Fifty-five percent (55%) of ATS 2005 respondents were currently employed. (The remaining percentage included those who are out of work, retirees, homemakers, disabled, and students.) Sixty percent (60%) of employed respondents work in companies or organizations of 50 or more people. Seventy-five percent (75%) of employees report working indoors only, 14 percent mostly outdoors, and 11 percent both indoors and outdoors.<sup>6</sup>

## 9.2. Workplace Exposure

There is little change from 2002 to 2005 in the percentage rate of exposure to tobacco smoke among those who work primarily indoors, from 15 percent to 14 percent. Figure 21 shows that respondents who work primarily outdoors, or both indoors and outdoors, have higher exposure rates than those who work primarily indoors.

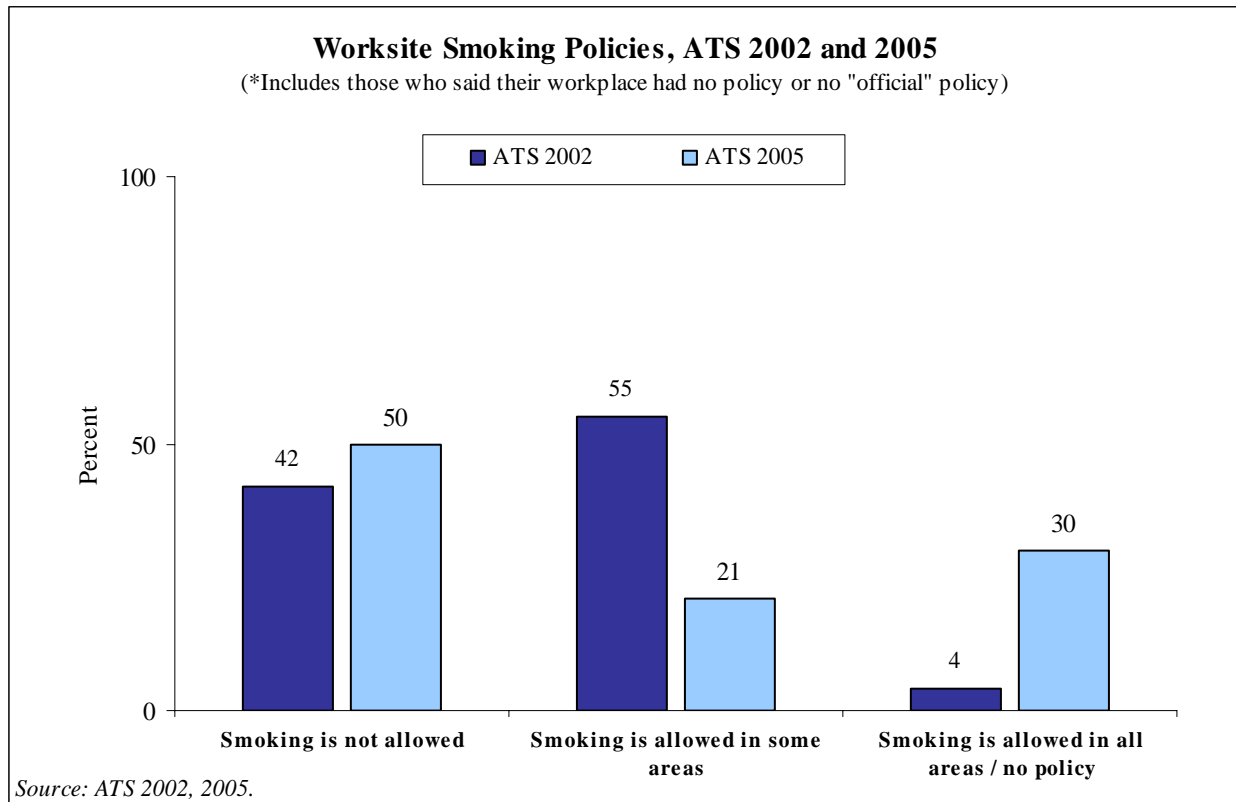
Figure 21. Exposure to tobacco smoke in the past seven days based on whether respondent primarily works indoors, outdoors, or both indoors and outdoors, ATS 2005.



### 9.3. Workplace Restrictions

There was an increase in the percentage of respondents who report that their workplace does not allow smoking, from 42 percent in 2002 to 50 percent in 2005. See Figure 22. A lower proportion of current smokers (60%) compared to non-smokers (74%) are employed at worksites that have an official policy that bans smoking.

Figure 22. Worksite smoking policies, ATS 2002 and 2005.



### 9.4. Workplace Smoking Policy Changes

In 2005, a new question was asked of ATS respondents about whether their worksite smoking policy changed in the past year (that is, if their worksite had an official policy). Six percent of currently employed respondents indicate that their worksite's smoking policy changed, and of these, 91% said the policy was made stricter.

### 9.5. Workplace Cessation Programs

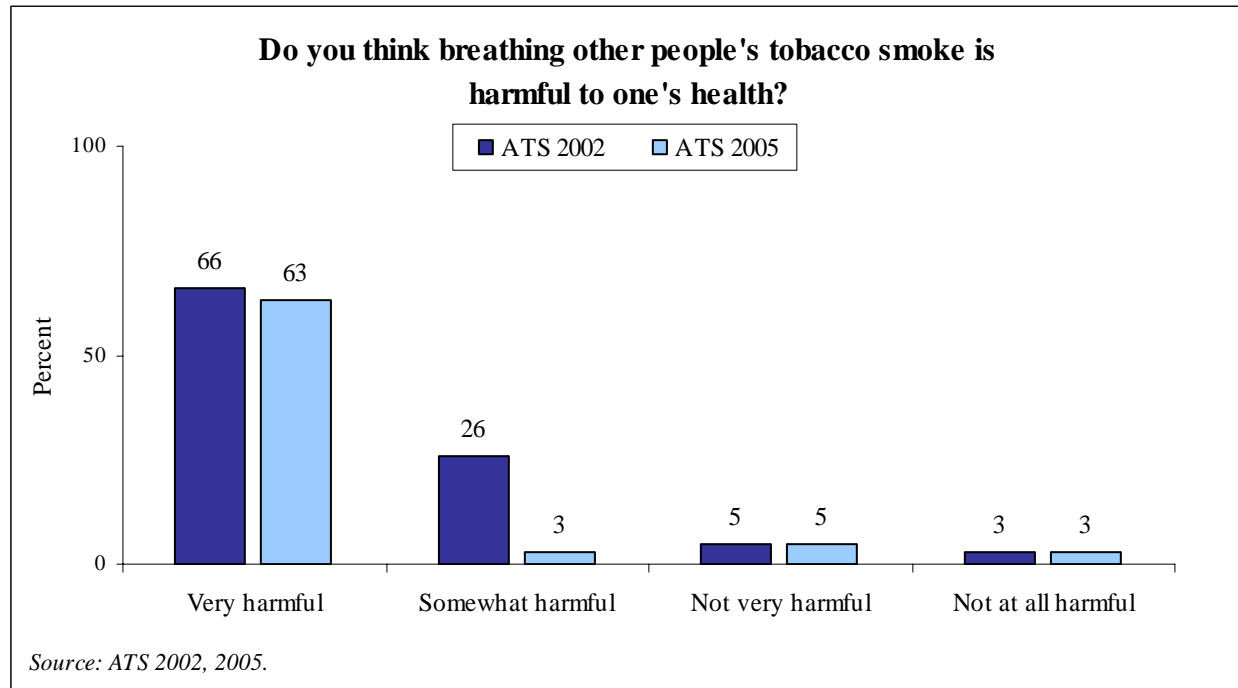
In another new question on the ATS 2005, 27 percent of employed respondents said their employer offered some type of program to help smokers quit smoking.



## 10. Perceptions about the Harm of Second Hand Smoke and Attitudes toward Smoking

The majority of the ATS respondents both in 2002 and 2005 (over 60%) believe that breathing other people's tobacco smoke is very harmful to one's health. There was not much change from 2002 to 2005 in respondents' perceptions of second hand smoke harm. See Figure 23.

Figure 23. Do you think breathing other people's tobacco smoke is harmful to one's health? ATS 2002 and 2005.



Several new questions were added to the ATS in 2005 to assess the public's attitudes about smoking that are considered to be indicators by the CDC for social norms about smoking. When responses based on current smoking status were examined, non-smokers more frequently responded they are bothered by other people's tobacco smoke "a lot" than current smokers (51% versus 7%, respectively). In contrast, current smokers reported being bothered "not at all" by tobacco smoke more frequently than non-smokers (55% versus 11%, respectively). See Figure 24.

Figure 24. How bothered are you by other people's tobacco smoke? Comparison of non-smokers with current smokers.

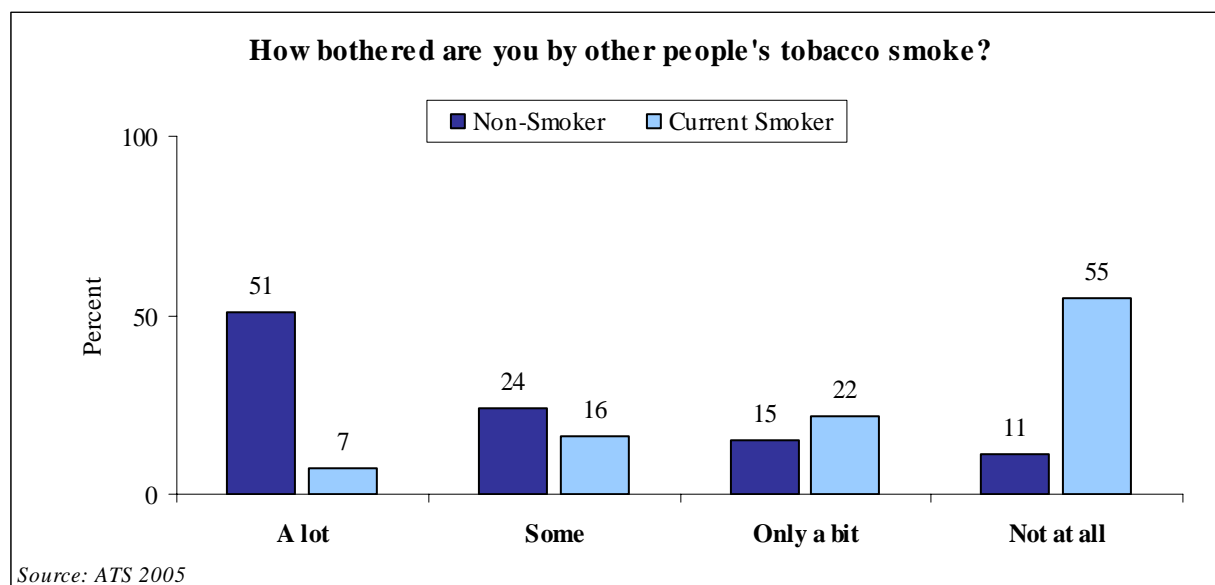


Table 9 shows the results from the new questions that were included in the ATS 2005 to assess respondents' views about tobacco social norms. Only 25 percent of ATS respondents report that they ever asked a stranger not to smoke around them in the past year. Of those who have a friend or family member who smokes, 73 percent have encouraged them to stop smoking. Of those who have a friend or family member who chews, 40 percent of respondents have encouraged them to stop chewing. For smokers, 60 percent reported that they were asked (by anyone) not to smoke in the past 12 months. For chewers, 50 percent reported that they were asked in the past 12 months (by anyone) not to chew. Finally, about a third of smokers (34%) reported that their child or children talked to them about stopping smoking.

Table 9. Attitudes toward smoking

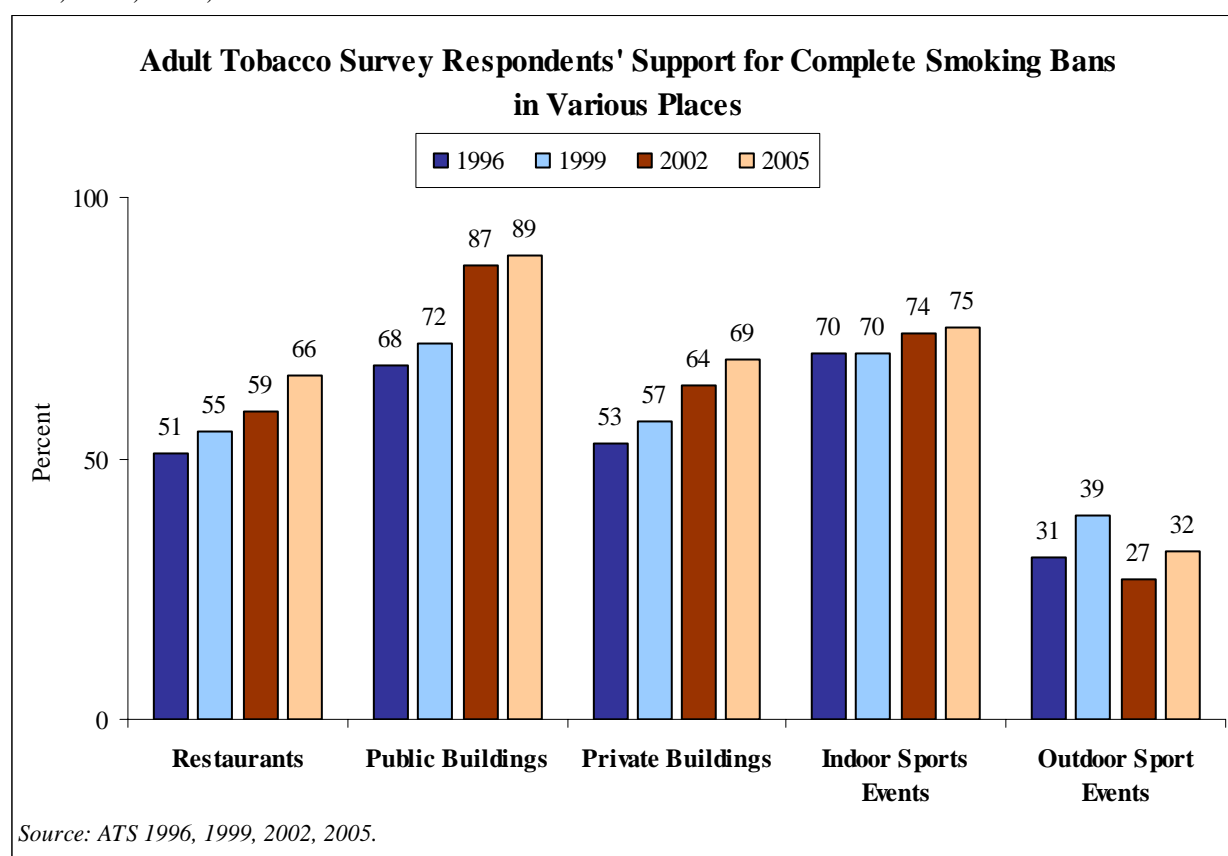
Attitudes toward smoking	Percent yes
In that past 12 months, have you ever asked a stranger not to smoke around you so you would not have to breathe their smoke?	25%
Of those who have a friend or family member who smokes: Have you encouraged a friend or family member who smokes to stop smoking?	73%
Of those who have a friend or family member who chews: Have you encouraged a friend or family member who chews to stop chewing?	40%
For smokers only: In the past 12 months, has anyone asked you not to smoke?	60%
For chewers only: In the past 12 months, has anyone asked you not to chew?	50%
For smokers who have children only: Has your child or children talked to you about stopping smoking?	34%
Source: ATS 2005	

## 11. Attitudes About Smoking in Public and Private Places

### 11.1. Support for Complete Smoking Ban by Type of Location

In 2005, support for complete smoking bans is highest for public buildings (89%) and indoor sporting events (75%). Respondent attitudes remained fairly stable from 2002 to 2005 for these areas. However, increases are shown from 2002 to 2005 for restaurants (59% in 2002 to 66% in 2005), private buildings (64% in 2002 to 69% in 2005), and outdoor sporting events (27% in 2002 to 32% in 2005). (Figure 25).

Figure 25. Adult Tobacco Survey respondents' attitudes toward complete smoking bans in various places, 1996, 1999, 2002, and 2005.



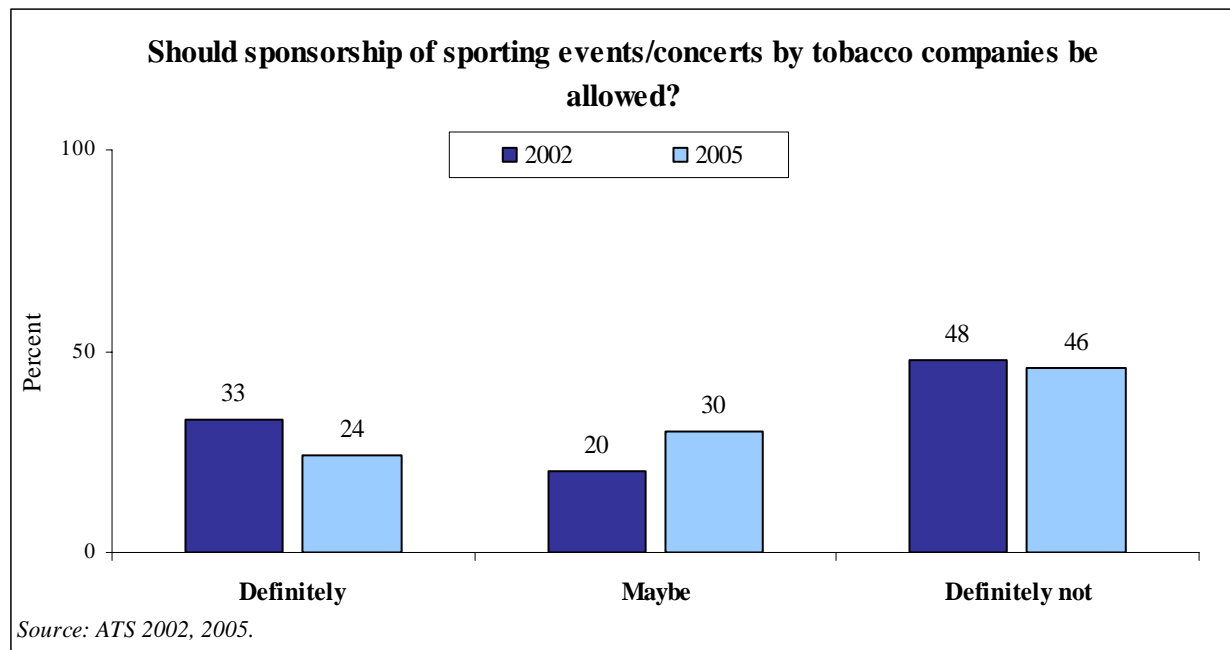
### 11.2. Attitudes about Smoking Restrictions in Bars

Respondents were also asked about whether smoking should be allowed in bars. This question was only asked in 2002 and 2005. Respondents in both years have somewhat similar attitudes, but with a slight shift toward more restrictions on smoking in bars: in 2002, 28 percent supported a complete ban, whereas 33 percent did in 2005.

## 12. Sponsorship of Sports Events by Tobacco Companies

Respondents in both 2002 and 2005 were asked if tobacco companies should be allowed to sponsor sporting events and concerts. Respondents appear to be shifting in their perceptions about restrictions on tobacco company sponsorships as shown by the change from 2002 to 2005 in the “maybe” response. That is, there is an increase from 20 percent in 2002 to 30 percent in 2005 of the “maybe” response that tobacco companies should definitely be allowed to sponsor these events.

Figure 26. Should sponsorship of sporting events/concerts by tobacco companies be allowed? ATS 2002 and 2005.



## 13. Importance of Restricting Storeowners' Sale of Tobacco

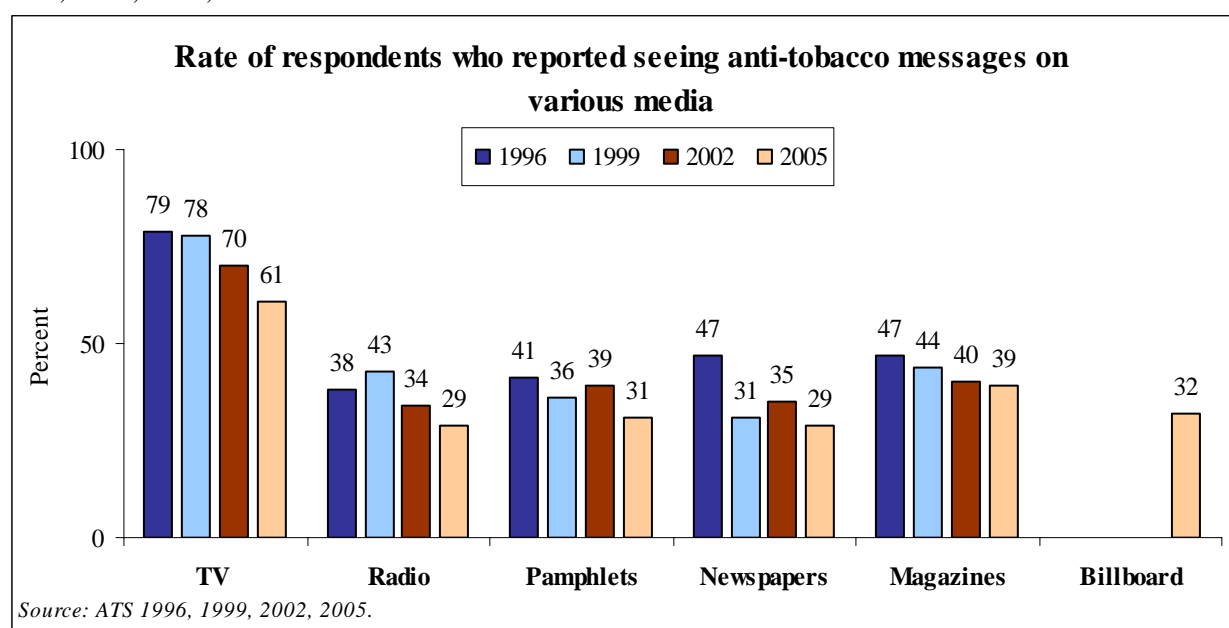
Two questions were asked of all ATS respondents about storeowners who sell tobacco. Nearly 88 percent of all ATS respondents in 2005 think it is very important that stores should not sell tobacco to minors. This finding reflects little change from the percentage reported in 2002 (87%). Also, 86 percent of all respondents agree or strongly agree that storeowners should have a license to sell tobacco products. In ATS 2002, 83 percent either agreed or strongly agreed that storeowners should be required to have a license to sell tobacco.

## 14. Awareness of Anti-Tobacco Messages

### 14.1. Recognition of Anti-Tobacco Media Messages

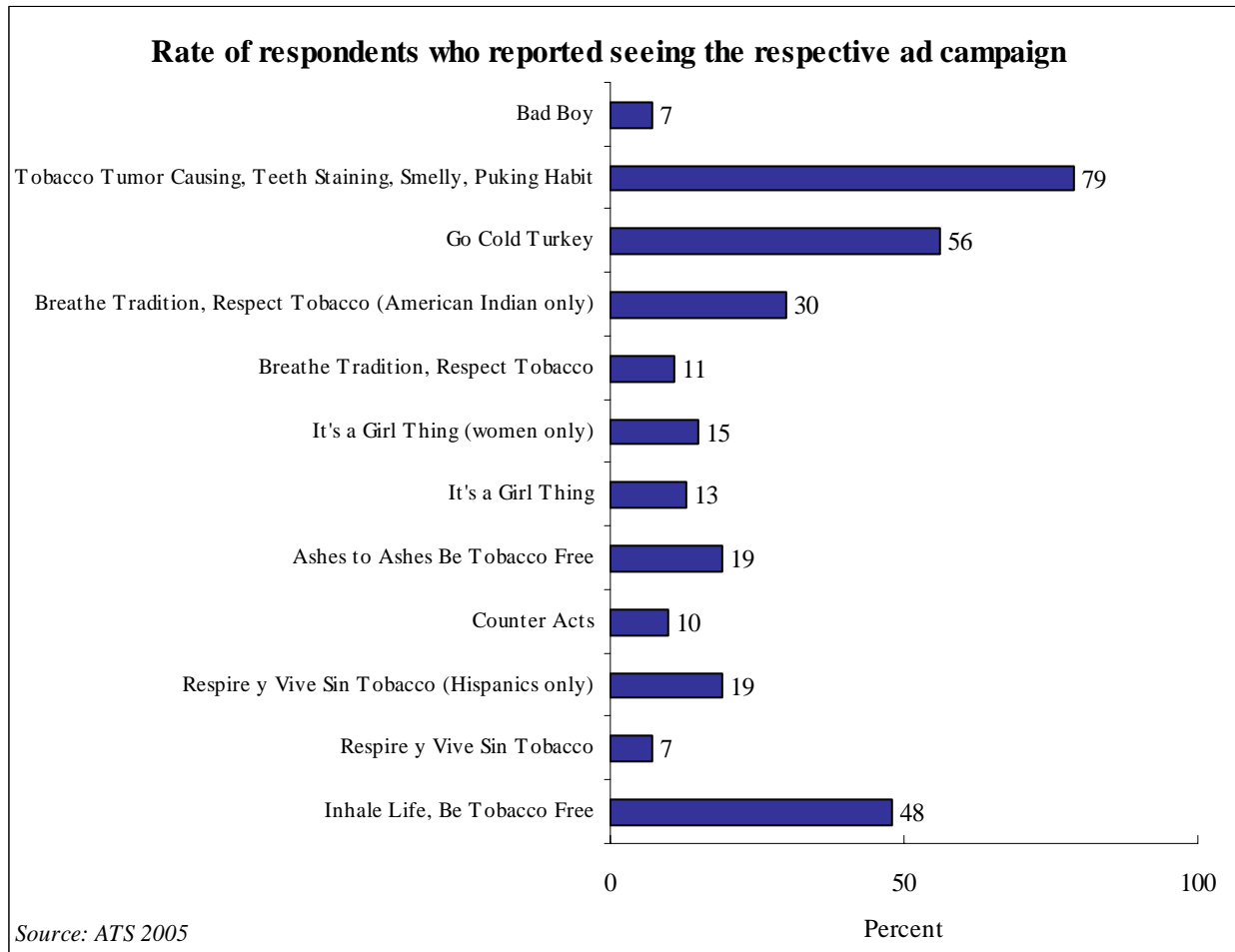
In each year of the ATS, respondents are asked if they had seen or heard any anti-tobacco messages in the past 30 days on TV and radio, and in pamphlets, newspapers, or magazines. The medium of billboards was added as a new question in 2005. For TV, the majority of respondents in each year of the ATS had seen an ad or message; however, the percentage rates have declined since 1996, from a high of 79 percent in 1996 to a low of 61 percent in 2005. Declines in percentage rates for the recognition of anti-tobacco messages in radio, pamphlets, and newspapers are also noted from 2002 to 2005. Reports of seeing a message in a magazine have remained steady over most years of the ATS. Finally, about a third of the respondents in 2005 (32%) report seeing an anti-tobacco message on a billboard in the past 30 days. See Figure 27.

Figure 27. Rate of respondents who reported having seen anti-tobacco messages on various media: ATS 1996, 1999, 2002, and 2005.



In 2005, respondents were asked if they had ever seen or heard various ads or anti-tobacco messages sponsored by the Arizona Department of Health Services. A fictitious ad, “Bad Boy,” was added to the list in order to test the validity of the responses. Figure 33 shows that “Tobacco Tumor Causing, Teeth Staining, Smelly, Puking Habit” had the highest recognition of all the ads at 79 percent. The next most frequently recognized ad was “Go Cold Turkey” at 56 percent. The lowest rate of recognition occurred for “Respire y Vive Sin Tobacco” (when asked of all respondents) and the fictitious ad “Bad Boy,” with a rate of seven percent for each.

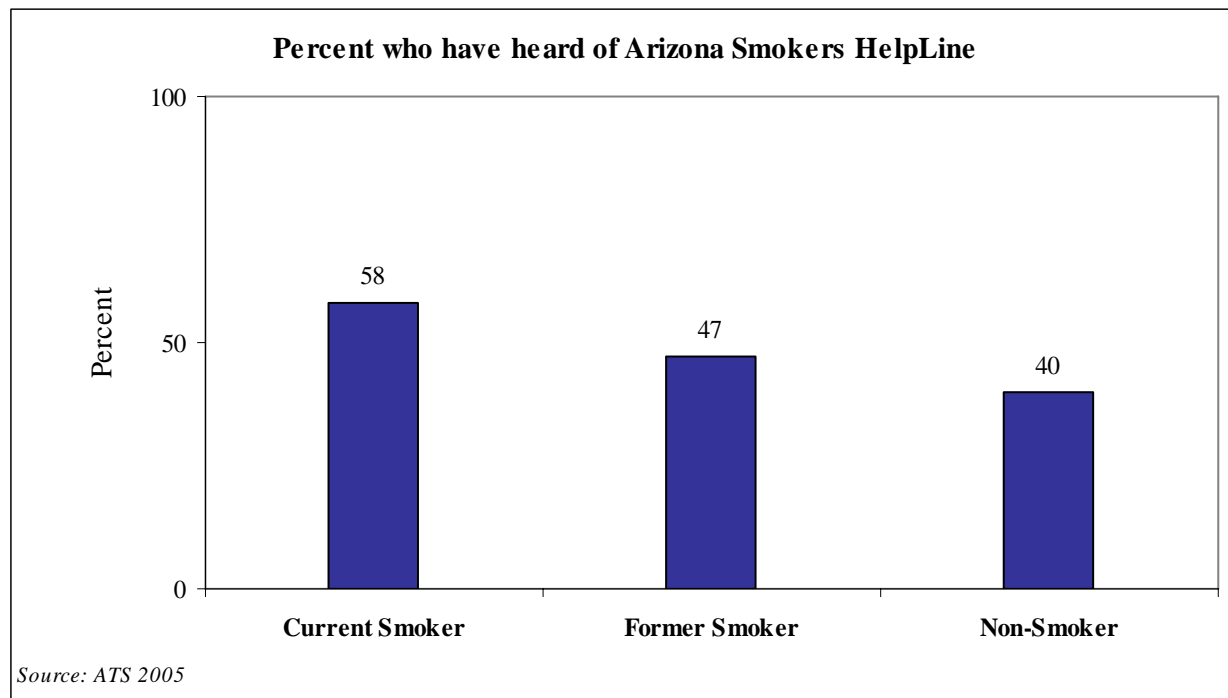
Figure 28. Rate of respondents reporting they saw the respective ad campaigns sponsored by Arizona Department of Health Services (ATS 2005).



#### 14.2. Recognition of Arizona Smokers Helpline

A new question was added in 2005 that asked respondents if they had heard of the Arizona Smokers' Helpline (ASHline), the statewide smoking cessation information and counseling phone service provided free-of-charge to all Arizonans. Overall, 45 percent of the respondents said they had heard of the ASHline. Figure 29 shows the rates of recognition of this smoking cessation service by the respondent's current smoking status. Fifty-eight percent (58%) of current smokers had heard of the service, compared to 47 percent of former smokers and 40 percent of non-smokers.

Figure 29. Percent who have heard of the Arizona Smokers' Helpline, ATS 2005.



### 15. Conclusions and Recommendations

#### Stable Smoking Prevalence Rates but Reduced Smoking Consumption

Adult smoking prevalence has remained stable since 1999, with roughly one in five adults (19%) in Arizona estimated to be current smokers. Similarly, the percentage of "ever smokers who quit" has stayed stable at 58 percent in 2002 and 2005. This reflects the total number of individuals who have smoked at least 100 cigarettes in their lifetime but are not currently smoking. Although smoking prevalence has remained relatively constant, there is, however, continuing evidence that Arizona smokers are smoking less. The amount smoked per day has decreased, which translates into a reduction in the median number of packs smoked per month from a high of 30 in 1999, to 23 in 2002, and to a low of 18 packs in 2005. Those who report smoking every day and some days appear to be reducing the amount they smoke.

## **Disparities in Adult Smoking Prevalence: Young Males, Low Education, and Low Income**

The prevalence rate of smoker demographic sub-groups is important information for assisting public health agencies in planning for services. When smoking rates are examined by gender, age, and education, patterns emerge that tend to mirror the national patterns of smoking prevalence. Overall, males tend to have higher smoking rates than females, and this difference is evident across all years of the ATS.

The youngest adults, age 18-24 years old, have the highest prevalence rates. Young males 18-34 years old have the highest prevalence rates, and those smokers with less than a high school education tend to have higher rates of smoking than those with a high school diploma or a college degree. These results, coupled with the high rates for young males, continue to suggest the need for intensified efforts in youth tobacco prevention, particularly with youth who are at risk for not completing high school.

Smokers, besides having lower educational attainment, also tend to have lower incomes, higher unemployment, and higher rates of being uninsured for healthcare when compared to non-smokers and the general Arizona population. This pattern of the poor and less educated having disproportionately high smoking prevalence rates exists nationally<sup>7</sup> and needs to be addressed strategically and systematically.

The prevalence rates for each racial or ethnic group show a pattern that is more difficult to interpret due to smaller numbers for certain groups (i.e., African Americans and American Indians) that provide unstable estimates. Owing to larger samples, it can be reported with relative confidence that white smokers tend to have the highest prevalence rates and Hispanic smokers tend to have the lowest rates. This trend has been evident since the ATS began in 1996.

The dramatic increase in prevalence shown for American Indians (from 15 percent in 2002 to 23 percent in 2005) is noteworthy. It is also difficult to interpret because American Indian use of tobacco is confounded by variations in cultural and traditional practices depending on tribal affiliation and beliefs. Part of this increase may be due to a sampling method change from 2002 to 2005 in the ATS, whereby more American Indians may have been sampled from urban areas than before. Another factor may be how the smoking questions are interpreted by American Indian respondents, since many tribes in Arizona use tobacco in traditional rituals. Finally, the current rate of 23 percent reported in 2005 for American Indians in Arizona is still considerably lower than the national rate of 34 percent. It may be that tribal groups in Arizona have smoking patterns different from those of other groups in other areas of the nation<sup>8</sup>.

## **Adult Smokeless Tobacco Prevalence Rates Stable**

Nearly 90 percent of smokeless tobacco users are male. This rate has stayed about the same in the 1996, 2002, and 2005 fieldings of the ATS. The rate for 2005, two percent, is lower than the national estimate of three percent. The assessment of smokeless tobacco prevalence in the surveys across the years has been inconsistent, which may have resulted in an under-estimate of the rates.<sup>9</sup> A better assessment of smokeless tobacco use could be obtained by conducting more focused studies.



### **Slight Increase in Quitting Behaviors**

The rate of quit attempts by current and former smokers has increased slightly from 43 percent in 2002 to 46 percent in 2005. Nearly 61 percent of current smokers said they were seriously considering stopping smoking in the next six months, and 21 percent said they were planning to stop in the next 30 days. These last two findings were from two new questions that were added to the ATS in 2005 and will serve as a baseline for future years to help gauge progress in motivating smokers to quit. These findings show that a high percentage of smokers desire to quit. Also, younger smokers show higher rates of quit attempts than older smokers. However, the use of some form of quitting assistance (pharmaceutical aids, counseling, self-help manuals, etc.) still remains relatively low, at about 32 percent, and the use of pharmaceutical aids has decreased from 23 percent in 2002 to 17 percent in 2005. The challenge that still remains for most tobacco control programs in the nation is recruiting motivated smokers to access their services. The decline in use of pharmaceutical aids could be an area that public health agencies might give more concerted focus in the near future. Recent studies have found that certain groups of smokers have misperceptions about the safety and use of nicotine replacement therapies; many also perceive these products to be prohibitively expensive.<sup>10</sup>

### **Medical and Dental Care Provider Counseling to Smokers is Down**

The health care setting is considered to be an appropriate and efficacious opportunity to counsel smokers about quitting. Research has shown that even two to three minutes of counseling by a health care provider can increase a smoker's chance of quitting<sup>11</sup>. While the rates of providers (both medical and dental) asking patients if they smoke has increased in each year of the ATS, the rates of providers recommending or counseling their patients who smoke to quit may have decreased since 1999. These findings indicate that further efforts to engage healthcare providers in innovative approaches to promote cutting back and quitting tobacco use are needed.

### **Reduced Exposure to Second Hand Smoke in the Home and at Work**

Second hand smoke reductions in high exposure settings not only impacts the health of non-smokers, but also smokers. Restrictions on where individuals can smoke can also motivate smokers to either reduce or quit smoking. The ATS 2005 results show that Arizonans second hand smoke exposure is of concern, with 25% of respondents reporting any exposure (in the past seven days) at home or in their car, and nearly 40% of those employed reporting any exposure at home, in their car, or at work. However, there appears to be decreases in second hand smoke in the home and work settings. For instance, exposure to smoke at home in the past seven days is down from 18 percent in 2002 to eight percent in 2005. Smoker households with smoking bans increased from 71 percent in 2002 to 77 percent in 2005. These gains are noteworthy, but new research indicates that second hand smoke residues may persist in the environment for indefinite periods and could negatively affect the health of infants and young children<sup>12</sup>. Efforts to reduce second hand smoke exposure in homes and other private places (i.e. cars) is a challenge for public health programmers because they must rely upon voluntary behavior change. Despite the difficulties of developing programming in this area, the potential for negative health outcomes (especially for children) from second hand smoke in these private to semi-private locations necessitates more intensive and creative strategies.

Compared to reports about decreases in home exposure to second hand smoke, the gains in the worksites were more modest. There was little change from 2002 to 2005 in the percentage rate of

exposure to tobacco smoke for those who work primarily indoors, from 15 percent to 14 percent. Also, although fewer respondents work outdoors overall, there are much higher exposure rates (55%) for outdoor work. However, there was an increase in the percentage of respondents who reported having a workplace that does not allow smoking, from 42 percent in 2002 to 50 percent in 2005. These findings indicate that continued tobacco prevention education and policy implementation efforts are still needed in the workplace, particularly with sites that involve outdoor work.

### **Attitudes about Smoking, New Questions for Assessing Change in Social Norms**

Several new questions were added to the ATS in 2005 that are designed to assess the public's social norms related to smoking. The rates measured in 2005 will serve as a baseline assessment to gauge whether the anti-tobacco social norms will increase in future years.

### **Awareness of Anti-tobacco Messages Still Relatively High Despite Reductions in Media Efforts**

Anti-tobacco media messages in Arizona have decreased substantially over the years due to funding cuts. Despite the diminished efforts in this area, about 60% of respondents say they have seen messages on the television in the past 30 days. However, in 1996 and 1999, when there were more intensive public marketing efforts, the recognition rates were nearly 80%. Also, in more recent years, it is unclear whether respondents are viewing ads sponsored by public health agencies or tobacco companies, since the tobacco industry is airing ads that seemingly promote smoking prevention and cessation. It is also worth noting that respondents still have very high recognition (79%) of the specific ADHS ad campaign of "Tobacco, Tumor Causing, Teeth Staining, Smelly, Puking Habit," which was taken off the market several years ago. In contrast, the current anti-tobacco ad of "Inhale Life, Be Tobacco Free" has a recognition rate of 48%. These results highlight the fact that intensive resources and efforts need to be invested in media campaigns in order for anti-tobacco messages to remain in public awareness.

## Endnotes

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- <sup>1</sup> [www.workforce.az.gov](http://www.workforce.az.gov), Arizona Department of Economic Security, July 1, 2005 Arizona Population Estimates
- <sup>2</sup> Lethbridge-Cejku M., Rose, D. (2005). Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2004. National Center for Health Statistics. Vital Health Statistics 10(228).
- <sup>3</sup> These rates have not been adjusted for other factors, such as age, gender, ethnicity.
- <sup>4</sup> Substance Abuse and Mental Health Services Administration. (2005). Results from the 2004 National Survey on Drug Use and Health. Detailed Tables. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Available at:  
<http://oas.samhsa.gov/nhsda/2k3tabs/Sect2peTabs1to56.htm#tab2.39>
- <sup>5</sup> Ibid.
- <sup>6</sup> Several new questions were added in the section on worksite exposure to tobacco smoke. One of these asked the employed respondent whether they worked primarily indoors, outdoors, or both indoors and outdoors.
- <sup>7</sup> Pampel, Fred C (2005). Diffusion, cohort change, and social patterns of smoking. Social Science Research, Vol 34(1), Mar 2005. pp. 117-139.
- <sup>8</sup> Henderson, Patricia Nez; Jacobsen, Clemma; Beals, Janette (2005). Correlates of Cigarette Smoking Among Selected Southwest and Northern Plains Tribal Groups: The AI-SUPERPFP Study. American Journal of Public Health, Vol 95(5), 867-872.
- <sup>9</sup> The questions used to assess the smokeless tobacco use prevalence rate varied across the years of the ATS. Also, in 2002, as opposed to the other years of the survey, those who smoked 100 cigarettes or more were screened out for these questions. The following are the questions used in each year of the survey to assess smokeless prevalence:  
1996/1999: Do you now use smokeless tobacco such as chewing tobacco, dip or snuff everyday, some days, or not at all? Every day Some days Not at all  
2002: Have you every used or tried any smokeless tobacco products such as chewing tobacco or snuff? Yes/no  
Do you currently use chewing tobacco or snuff every day, some days, or not at all?  
2005: Have you every used or tried any smokeless tobacco products such as chewing tobacco or snuff? Yes/no  
Do you currently use chewing tobacco or snuff every day, some days, or not at all?
- <sup>10</sup> Cummings, K.M., & Hyland, A. (2005). Impact of nicotine replacement therapy on smoking behavior. *Annual Review of Public Health*, 26, 583-589.
- <sup>11</sup> U.S. Department of Health and Human Services (2000). Clinical Practice Guideline: Treating Tobacco Use and Dependence. Public Health Service.
- <sup>12</sup> Matt, George E (2006). Personal communication.

## Appendix

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ATS 2005 Questionnaire